



TAMPERE UNIVERSITY OF TECHNOLOGY

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**KNOWLEDGE WORK ENABLERS AND CHALLENGES IN  
DIFFERENT PROFESSIONS**

Master of Science Thesis

Prof. Samuli Pekkola and Dr. Nina Helander have been appointed as the examiners at the Council Meeting of the Faculty of Business and Technology Management on October 3<sup>rd</sup>, 2012.

# ABSTRACT

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The purpose of this study was to examine the enablers and the challenges of the knowledge work in different professions. The chosen professions were teacher, physician, lawyer, pastor and conductor. The objective of the thesis was approached by studying the knowledge work enablers and challenges first theoretically and then empirically. Finally, the empirical findings were analysed by comparing the professions with one another and discussing the findings together with the theoretical findings.

The study was a qualitative research which followed the hermeneutic idea of science. Therefore, the study aimed to gain an understanding of the research phenomenon and examine it from different angles. In addition, the study was slightly influenced by the conceptual approach. The research was carried out as a multiple case study research so that the different professions presented the separate cases. The data for this thesis was gathered by using the narrative interview method. From each profession there were interviewed four professionals.

The enablers and challenges raised from the empirical part of the study were broadly in line with the theoretical results. Consequently, almost all of the knowledge work enablers and challenges presented in the context of the literature review were realised in the empirical part of the study. These elements were for example the physical work environment, information technology and organisational climate. In addition, the empirical part highlighted also various other enablers and challenges which were specific for the professions.

As a whole, there were seen also a lot of similarities in the enablers and the challenges that were indicated in the empirical part of the study. They were typically the elements that facilitated or challenged the professionals' core work. In addition, the enablers and challenges that were discussed in the empirical part of the study helped or prevented the professionals to cope with their heavy workload. On contrary to the similarities in the enablers and challenges of knowledge work, the specific factors made it that the enablers and the challenges in the different professions were not completely the same regardless of the profession.

# TIIVISTELMÄ

TAMPEREEN TEKNILLINEN YLIOPISTO

Tietojohtamisen koulutusohjelma

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Tietotyön merkitys yhteiskunnassa on kasvanut tärkeään asemaan tietoyhteiskunnan kehittymisen myötä. Työtehtävät, jotka vaativat itsenäistä päätöksentekoa ja ongelmanratkaisukykyä, ovat yleistyneet suhteessa perinteiseen manuaaliseen työhön. Tämä kehitys vaatii jatkuvaa muutosta organisaatioilta ja niiden työntekijöiltä. Nopeasti kehittyvä teknologia ja lisääntyvä informaatio haastavat yksilöt jalostamaan omaa tietämystään ja oppimaan alati uusia taitoja. Toisaalta tämä myös vaatii yksilöiltä paljon ja siten työ voidaan kokea kuormittavana, etenkin jos työympäristöön liittyvät tekijät ei ole kunnossa.

Tämän diplomityön tavoitteena oli tarkastella tietotyön mahdollistajia ja haasteita eri professionien näkökulmasta. Tutkimuksen pääkysymys oli ”Tietotyön mahdollistajat ja haasteet eri professionissa”. Siihen pyrittiin vastaamaan kolmen eri alakysymyksen avulla: 1. Mitä on tietotyö ja miten professio määritellään? 2. Mitkä tekijät mahdollistavat tietotyön tekemisen? 3) Mitkä tekijät haastavat tietotyön tekemisen? Työn tavoitteena oli analysoida, ovatko tietotyön mahdollistajat ja haasteet samanlaisia professionista riippumatta. Lisäksi työssä pyrittiin osoittamaan, mitkä kirjallisuudessa esitetyistä mahdollistajista ja haasteista todella realisoituivat valituissa professionissa.

Tutkimus oli luonteeltaan laadullinen tutkimus, joka perustui hermeneuttiseen tieteenkäsitykseen. Lisäksi työssä näkyi piirteitä käsiteanalyttisestä tutkimusotteesta. Tutkimus toteutettiin usean tapauksen tutkimuksena (multiple case-study) siten, että viisi eri professiota (opettaja, lääkäri, lakimies, pappi ja orkesterinjohtaja) edustivat omia tarkasteltavia tapauksiaan. Aineistoa kerättiin kirjallisuusselvityksen lisäksi narratiiveihin rakentuneiden haastattelujen avulla. Tutkimuksen puitteissa haastateltiin yhteensä 20 tietotyöläistä, joten kustakin ammattikunnasta haastateltavana oli neljä henkilöä. Kerättyä haastattelumateriaalia analysoitiin laadullisesti ja aineistolähtöisesti luokittelemalla ja yhdistelemällä esille nousseita asioita.

Tietotyöteemaa lähestyttiin tutkimalla tietotyön merkityksen nousua tietoyhteiskunnassa sekä vertailemalla tietotyötä manuaaliseen työhön. Työssä tarkasteltiin myös useita tietotyön ominaisuuksia, kuten työskentely-ympäristöä, tiimityön osuutta sekä informaatioteknologian käyttöä. Lisäksi perehdyttiin erilaisiin tietotyötoimintoihin ja niiden perusteella valittiin tämän työn keskeisimmät tietotyötoiminnot: oppiminen, tiedonhankinta ja jakaminen, yhteistyö ja kommunikointi.

Tässä työssä käytettiin sekä tyologista että toiminnallista luokittelua professioiden määrittelyssä. Tyologisen määritelmän mukaan todettiin, että professioilla on tiettyjä ominaisuuksia, jotka erottavat ne ei-professioista. Toiminnallinen määritelmä puolestaan tarkasteli, minkälainen merkitys professioilla on yhteiskunnallisesti. Työssä todettiin, että professiot toimivat usein ihmisille tärkeiden teemojen, kuten koulutuksen, terveyden, syyllisyyden ja surun parissa. Tietyt tehtävät on määritelty yksinomaan tietyille professioille. Työssä perusteltiin näiden määritelmien avulla, että valittuja viittä ammattikuntaa voidaan pitää professioina ja että niitä todella voidaan tarkastella professioiden näkökulmasta. Lisäksi todettiin, että näiden professioiden työ on luonteeltaan tietotyötä.

Tietotyön mahdollistajiin ja haasteisiin perehdyttiin ensin kirjallisuusselvityksen avulla. Kirjallisuuskatsauksen perusteella todettiin, että keskeisimmät mahdollistajat tietotyössä liittyivät fyysiseen työympäristöön, organisaatiokulttuuriin ja sosiaalisiin tekijöihin, motivaatioon ja työhön sitoutumiseen sekä informaatioteknologiaan. Tietotyöhön liittyviä haasteita tarkasteltiin puolestaan fyysisen työympäristön, sosiaalisten, kulttuuristen ja kontekstuaalisten tekijöiden sekä informaatioteknologian näkökulmasta. Tarkastelun yhteydessä myös esitettiin, että tietotyöhön vaikuttavilla tekijöillä on keskinäinen riippuvuus toistensa suhteen ja siten esimerkiksi tietty tietotyöhaaste voi vaikuttaa myös muihin tietotyöhaasteisiin.

Kirjallisuuskatsauksen lisäksi professioiden tietotyön mahdollistajia ja haasteita tarkasteltiin myös empirian avulla. Haastattelujen perusteella havaittiin, että eri professioilla oli hyvin paljon yhteneviä mahdollistajia ja haasteita heidän tietotyössään. Tärkeimmät mahdollistajat liittyivät erityisesti professioiden perustyön sujuvuuteen. Tällaisia tekijöitä olivat esimerkiksi informaatioteknologia, fyysinen työympäristö, sihteerit sekä rutiinit ja työkokemus. Toisaalta keskeisimmät tietotyön mahdollistajat, kuten työilmapiiri ja kollegat, työn ja vapaa-ajan erottaminen sekä auttamisen ja oppimisen halu, edistivät yksilöiden työssäjaksamista. Huomattavimmat tietotyön haasteet puolestaan estivät perustyön tekemistä sekä aiheuttivat stressiä ja painetta työntekijöille. Tietotyöntekijöiden perustyöhön liittyvät oleelliset haasteet liittyivät suureen tiedon määrään, fyysinen työympäristöön sekä aikataulujen muutoksiin. Lisäksi työssäjaksamisen, stressin ja paineenhallinta nousivat keskeisimmiksi haasteiksi eri professioiden tietotyössä.

Empiriasta nousseet mahdollistajat ja teemat mukailivat paljolti teoriaosuudessa käsiteltyjä tietotyön mahdollistajia ja haasteita. Näin ollen lähes kaikki kirjallisuuskatsauksen yhteydessä esitetyt tietotyön mahdollistajat ja haasteet realisoituivat tämän tutkimuksen yhteydessä. Lisäksi kuhunkin professioon liittyen nousi esiin ominaisia tekijöitä, jotka mahdollistivat tai haastoivat juuri kyseisen profession tietotyön tekemiseen. Nämä ominaiset mahdollistajat ja haasteet tekevät juuri sen, että kukin professio on luonteeltaan juuri sellainen kuin on.

Lopuksi tutkimuksen tuloksia arvioitiin tapaustutkimuksille tyypillisten arviointinäkökulmien avulla. Tässä yhteydessä todettiin, että tutkimuksen tuloksien perusteella ei voida tehdä kaikkiin professioihin tai tietotyöläisiin yleistettäviä tuloksia. Tämä on tyypillistä laadullisissa tapaustutkimuksissa. Toisaalta näin ei kuitenkaan pyrittykään tekemään, vaan työssä oli pikemminkin tavoitteena saada käsitys tutkittavasta aihealueesta sekä pyrkiä analysoimaan sitä monipuolisesti kirjallisuuden ja empirian avulla.

Kaiken kaikkiaan työssä onnistuttiin vastaamaan asetettuihin alakysymyksiin sekä niiden perusteella varsinaiseen tutkimusongelmaan. Käytetyt tutkimusmenetelmät tukivat tavoitteisiin pääsyä hyvin ja lisäksi työ pysyi asetettujen rajausten puitteissa. Esimerkiksi narratiiveihin perustuneiden haastattelujen valinta oli oivallinen, sillä sen avulla oli mahdollista saada monipuolisempi käsitys eri professioiden tietotyön luonteesta. Tämä tutkimus nosti pinnalle myös uusia mahdollisia jatkotutkimusaiheita. Näin ollen tutkimusta voidaan pitää onnistuneena.

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Niina Paavilainen

# TABLE OF CONTENTS

<b>ABSTRACT .....</b>	<b>i</b>
<b>TIIVISTELMÄ.....</b>	<b>ii</b>
<b>PREFACE .....</b>	<b>v</b>
<b>TABLE OF CONTENTS.....</b>	<b>vi</b>
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1. Background .....	1
1.2. Research problem and research questions .....	3
1.3. Research scope, theory field and limitations .....	4
1.4. Research strategy and the research process .....	5
1.5. Outline of the study.....	9
<b>2. KNOWLEDGE WORK AND PROFESSIONS .....</b>	<b>11</b>
2.1. What is knowledge work? .....	11
2.2. How to define a profession? .....	17
2.2.1. Knowledge work professions.....	22
2.2.2. Teacher – A profession or a semi-profession? .....	24
2.2.3. Physicians – continuous learning and commitment to excellence.....	26
2.2.4. Lawyers – the protectors of justice .....	28
2.2.5. Pastors – a life-long profession among the congregation.....	30
2.2.6. Conductors – the profession of studying and interpreting the composers’ intentions .....	31

2.2.7. Summary of the five chosen professions.....	33
<b>3. KNOWLEDGE WORK ENABLERS.....</b>	<b>40</b>
3.1. The physical work environment .....	40
3.2. Organisational culture and social aspects enabling knowledge work .	41
3.3. Motivation and job involvement improving knowledge work .....	43
3.4. Information technology essentiality for knowledge workers .....	45
3.5. Summary of the key elements enabling knowledge work .....	48
<b>4. KNOWLEDGE WORK CHALLENGES.....</b>	<b>52</b>
4.1. Physical work environment .....	52
4.2. Social, cultural and contextual elements challenging knowledge work ... .....	55
4.3. Information technology challenges in knowledge work.....	57
4.4. Summary of the key elements challenging knowledge work.....	59
<b>5. EMPIRICAL RESEARCH.....</b>	<b>62</b>
5.1. Methods of data gathering .....	62
5.2. Methods of data analysis .....	64
<b>6. Empirical findings .....</b>	<b>66</b>
6.1. Teachers.....	66
6.1.1. The physical work environment is one of the key enablers of the teacher's knowledge work .....	66
6.1.2. Difficult pupils and their parents challenge the teacher's knowledge work .....	70
6.2. Physicians .....	75
6.2.1. Positive work environment and the motivation to the continuous learning enable the physicians' knowledge work .....	75



6.2.2. Busy and stressful work are the key challenges the physician's knowledge work .....	80
6.3. Lawyers .....	86
6.3.1. Altruism and the emotional intelligence are the key enablers of the lawyer's knowledge work .....	86
6.3.2. The heavy workload and haste are the key challenges in the lawyer's knowledge work .....	91
6.4. Pastors .....	95
6.4.1. The ability to be with other people is the main enabler of the pastor's knowledge work .....	95
6.4.2. Financial matters and irregular work are significant challenges the pastor's knowledge work .....	102
6.5. Conductors .....	106
6.5.1. Time management and careful self-preparation are the key enablers of the conductor's knowledge work .....	106
6.5.2. Irregularity challenges the conductor's knowledge work.....	111
6.6. Summary and comparison of the empirical results .....	116
<b>7. DISCUSSION AND CONCLUSIONS .....</b>	<b>120</b>
7.1. Results of the study .....	120
7.2. Discussion and implications.....	129
7.3. Assessment of the study.....	131
7.4. Suggestions for future research.....	133
<b>REFERENCES.....</b>	<b>135</b>

# 1. INTRODUCTION

What are the enablers in the knowledge work of different professions or are there key factors that challenge or even prevent the professionals' knowledge work? Are the enablers and challenges broadly similar regardless of the profession or do they differ to some extent? These are the main issues that will be discussed in this master's thesis. This study provides an analysis of knowledge work, its enablers and challenges, and it will examine these issues through different professions.

## 1.1. Background

Finland has become a knowledge society which means that information and knowledge management has a significant economic role and its importance has increased alongside the traditional manufacturing and production. Knowledge society expects continuous regeneration from the business fields and the organisations. For example Pyöriä (2006b, p. 23) describes that the formal education requirements have increased and tasks that involve autonomous decision-making and non-routine problem solving have become more general. Since the life cycle of information and technology has become increasingly shorter, it challenges individuals as well as organisations to advance their knowledge and skills constantly in order to keep abreast of the developments (Björklund, 2010, p. 518). As a result of the revolution of knowledge society and knowledge work, the significant proportion of work has moved from manual work to a more cognitive process (Pyöriä, 2006b, p. 23).

Knowledge work has risen to a significant role in modern societies during the latter half of the 20<sup>th</sup> century. It can be seen as a result of a major social and cultural transformation (Pyöriä, 2006a). According to Reinhardt et al. (2011, p. 150) knowledge work has also become an important theme in current research and development efforts since Drucker (1957) presented the shift from manual work to non-manual work.

Knowledge work can be defined from various perspectives (see e.g. Kelloway and Barling, 2000). In literature, it is often compared with manual work. Bosch-Sijtsema et al. (2009, pp. 534-535) say that knowledge work means creating, sharing and applying of knowledge and is typically done by talented, highly educated and autonomous individuals. These individuals are consequently called knowledge workers.

This study will examine knowledge work from the viewpoint of different professions. The term "professions" has been connected to highly-respected and traditional occupations such as physicians, priests and lawyers (Helander, 1993, p. 36; Pellgrino,

2002, p. 378). Despite these few, historically old, professions, a modern profession has been formed not until the mid-1800 (Mykkänen and Koskinen, 1998, p. 30).

Nowadays, each profession has a control over the complexity of the specialised knowledge and they have given the empowerment for using that knowledge. They are also required to transfer their knowledge by teaching the future practitioners. (Cruess et al., 2002, pp. 208-209.) Furthermore, professions enjoy a great appreciation and an authoritative position over the customers and other occupational groups (Mykkänen and Koskinen, 1998, p. 1).

In this study, particularly the relationship between knowledge work and each profession is examined. Firstly, the thesis strives to comprehensively define knowledge work and a profession, and how the professions are related to knowledge work. Pyöriä (2006b, p. 25) for example discusses that the emerge of knowledge society has developed the social hierarchy of the labour division which originates from the industrial period. As knowledge production, procession and transformation have become a part of the job description for more and more people, the special status of the traditional professions have suffered considerably and new professions are arising (Pyöriä, 2006b, p. 26).

Secondly, this study focuses on the enablers and the challenges of knowledge work. There are evidently large differences in knowledge workers' outcomes at work. This study aims to find those elements that enable and possibly challenge or even disable knowledge workers' work performance. According to Bosch-Sijtsema et al. (2008, p. 5), some reasons for the variability in knowledge work outcomes may arise from the characteristics of the knowledge work task since they can vary greatly from routine tasks to highly creative tasks. There are also various contextual elements such as organisational and social aspects that may influence knowledge work to some extent. (Bosch-Sijtsema et al., 2008, p. 5) For example, the elements like organisational culture, strategy, leadership, colleagues and reward programs may motivate employees and enable knowledge workers' work but on the other hand they may hinder their performance significantly. Furthermore, the physical and technological environment may affect the knowledge workers' performance at work. Physical aspects, such as work outside the office, geographic distance and differences in time zones, are typically closely related to technical barriers. This is because the lack of appropriate technical tools becomes even more pronounced when the employees are geographically distant from the office and from each other (Matson and Prusak, 2010, p. 94). On the other hand, functional collaboration and communication technologies may significantly contribute to knowledge work and enable the work despite the time and location.

This thesis is conducted at the department of Business Information Management and Logistics at the Tampere University of Technology. It acts as a preliminary study for a planned wider knowledge work project. The project will further investigate the

knowledge work enablers and challenges by carrying out a survey for knowledge workers. In addition, the project aims to create solutions to promote knowledge work. Therefore, this qualitative study serves the following knowledge work project since the survey is created based on the findings of this research. This study provides an understanding which makes it possible to carry out the quantitative survey.

## **1.2. Research problem and research questions**

The main objective of this study is to investigate the enablers and the challenges of the knowledge work from the viewpoint of different professions. The thesis will review the relationship between knowledge work and the certain professions and investigate the enablers and the challenges of knowledge work of these professions. The main research question of this study is: *What are the enablers and the challenges in the knowledge work of different professions?* It can be discussed and answered through following sub-questions.

1. What is knowledge work and how to define a profession?
2. What are the factors enabling knowledge work?
3. What challenges are related to knowledge work?

The first sub-question will be answered based on the literature review so the approach to this question is evidently theoretical. The objective of this question is to gain the insight of knowledge work and to define comprehensively a profession. In addition to the knowledge work definitions, the knowledge workers and different knowledge work actions are described in this connection. Moreover, the study discusses the chosen professions through the literature. This gives support to the selection of the five different professions that will be analysed empirically during the research.

The second and the third sub-questions are firstly discussed by reviewing the literature; these questions are studied in a general level from different perspectives in order to attain support for the final part of the research. After that the main research objective will be approached by exploring empirically the enablers and the challenges of the chosen professions. It will be done by interviewing the knowledge work professionals. Particularly, the knowledge workers which represent the chosen professions are interviewed and on this basis, the thesis will confirm which of the above presented enablers and challenges are realised. Moreover, this study compares whether the enablers and the challenges are similar regardless of the profession or whether they differ to some extent.

### **1.3. Research scope, theory field and limitations**

According to Kelloway & Barling (2000, pp. 7-9) the knowledge work can be defined from the different perspectives. Firstly, knowledge work can be seen as a profession which may be for instance a lawyer, engineer or designer. On the other hand, it can be defined as an individual characteristics or an individual activity. These aspects focus on what an individual actually do in his or her daily work and how the individual contributes to the organisation as a result of the personal characteristics. (Kelloway and Barling, 2000, pp. 7-9.) This study examines the knowledge work from all of these aspects but the emphasis will be on the knowledge work professions. Consequently, this study will discuss the specific characteristics and activities of different knowledge work professions.

In recent decades, knowledge work has often been investigated from the organisation perspective (see e.g. Alvesson, 2000) and even from the level of the entire society (see e.g. Pyöriä 2006a). These studies have been focused, for example, on the knowledge work productivity (see e.g. Drucker, 1999 ) or on the other hand, the emphasis has been on the structural change of the economies towards the knowledge economies (see e.g. Kelloway and Barling, 2000). This study, however, approaches knowledge work from the individual point of view and strives to find the elements and factors that enable or prevent the individuals' knowledge work.

The theory field is based on the knowledge work and knowledge management (KM) literature. This literature discusses comprehensively the nature of knowledge work and knowledge work actions as well as the characteristics of knowledge workers. Reinhardt et al. (2011, p. 150) states that the organisational knowledge management sets knowledge as an organisational resource and accentuates the importance of knowledge work to achieve competitive advantage. Knowledge management research focuses, among other things, on the motivational aspects of knowledge sharing within the organisation so this research field will offer an important perspective to the enablers and the challenges of knowledge work (see e.g. Alavi et al., 2006). Even though, this study do not emphasise the productivity viewpoint, the literature dealing with the knowledge work productivity entails also an important insight into the enablers and the challenges of knowledge work (see e.g. Drucker 1999). In addition, the literature focusing on the professions has a strong emphasis on sociology. For example, in Finland the social sciences have widely studied professions and professionalism and these findings are also used in this thesis (see e.g. Pyöriä, 2006).

In this study, there have been chosen five different professions and the knowledge work of these for the further analysis. These professions are lawyer, teacher, physician, pastor and conductor. Some of these professions have also existed for a long time but as a result of the changes in most societies towards more knowledge-intensive economies,

they have also developed accordingly. The professions, such as physician, pastor and lawyer, are considered as older professions while the conductors and teachers are newer professions. Conductor's profession is also a creative profession. In addition, these professions are dealing with the important themes in human life, such as with health and illness, guilt, grief and education. Hence, these professions are socially very important. They all have some special and unique features which are interesting to discuss from the viewpoint of knowledge work. These professions offer, thus, a diverse insight of the knowledge work and its enablers and challenges.

The interviewees' background information, such as age, gender, place of residence, may have an effect on the research findings but they will not be taken into account in this study. These factors and their possible impact are understood but the more detailed analysis of them is however excluded from this study. This study is relatively small qualitative research which examines knowledge work enablers and challenges in general level and hence, the interviewees generate as homogenous sample as possible. They solely represent the chosen professions.

#### **1.4. Research strategy and the research process**

According to Kasanen et al. (1991, p. 313), the research strategy is usually referred to the researcher's methodological decisions which are based on the philosophical commitments and the methods used in the study. Additionally, some other elements, such as researcher's general world view, perception of science and ethics may have an effect on the choice of the research strategy. Kasanen et al. (1991, p. 313) separate the commonly used business research strategies into the following themes:

1. Positivistic or interpretive and critical (hermeneutic) research
2. Qualitative or quantitative research
3. Research based on large or small empirical samples.

Olkkonen (1994, pp. 26-27) states that the most used philosophical ideas of science are positivism and hermeneutics. Positivism refers to the scientific approach, which rests specifically upon the confirmed facts and rejects all doubtful and questionable issues, which are not detectable. It examines and analyses the phenomenon in that context where the phenomenon actually occurs. (Olkkonen, 1994, pp. 26-27.) In interpretive and critical studies, on the other hand, the effect of the hermeneutic philosophy of science is emphasised (Kasanen et al., 1991, p. 313). Hermeneutics refers to the interpretation and the understanding of the meanings. It is associated with the studies that investigate a new research field or a case which do not yet have broad data for statistical analysis. According to the hermeneutic philosophy of the science, the research case is unique and this type of research aims to gain the comprehensive insight of the phenomenon. It does not guarantee independent results that are easy to generalise since this approach

discusses the phenomenon through understanding and interpretation. Therefore, it is also difficult to reproduce the research as such. Positivism, on the other hand, requires that the research is reproducible and it is independent of the researcher, so that the same research sample and the research methods offer in most cases the same results. (Olkkonen, 1994, pp. 50-54.)

According to this classification between positivistic and hermeneutic approach, this study has a stronger basis on hermeneutic approach to the science. Indeed, this study aims to describe and interpret knowledge work and the factors that enable or possibly hinder it. This study is not readily reproducible as such and the results may not be generalised to other professions or knowledge workers. In addition, the researcher's own interpretation and understanding affects the research findings to some extent even though the research is intended to carry out as objectively as possible. The selected empirical cases provide different nuance to the investigated phenomenon which may affect and shape the researcher's perception and interpretation (Gummesson, 2006, pp. 172-173). Therefore, this study cannot be fully regarded as objective research which is typical for studies that are based on the hermeneutic philosophy of science.

Other classification in business research strategies is the division between qualitative and quantitative research. Ghauri & Grønhaug (2005, pp. 108-109) states that the choice of a qualitative or quantitative research depends on the research problem and the research goal. In qualitative research, the emphasis lies on understanding whereas in quantitative research the focus is on the testing and verification of the phenomenon. The issue is usually observed and measured in its natural settings in case of qualitative study while in quantitative research the measurement arrangement is relatively controlled. In addition, the qualitative research is a process oriented completeness in which the skills and experience of the researcher play an important role in the analysis of the data. Quantitative study is typically result oriented and the research itself should be generalised and reproducible. (Ghauri and Grønhaug, 2005, pp. 108-109.) According to the division introduced above, this study follows a qualitative research since the main purpose of this study is to understand and interpret certain professions' knowledge work. The enablers and challenges of knowledge work are observed and measured in interviewees natural contexts.

Kasanen et al. (1991, p. 314) writes that especially small empirical sample is generally used in case studies. These types of studies achieve the deep and comprehensive insight of the investigated phenomenon by using a single or few research subjects. (Kasanen et al., 1991, p. 314; Ghauri and Grønhaug, 2005, p. 112.) This approach is well suited for this research. As mentioned previously, this study uses five professions that are examined from the knowledge work point of view. The professions, that will be studied, create the empirical sample of this study.

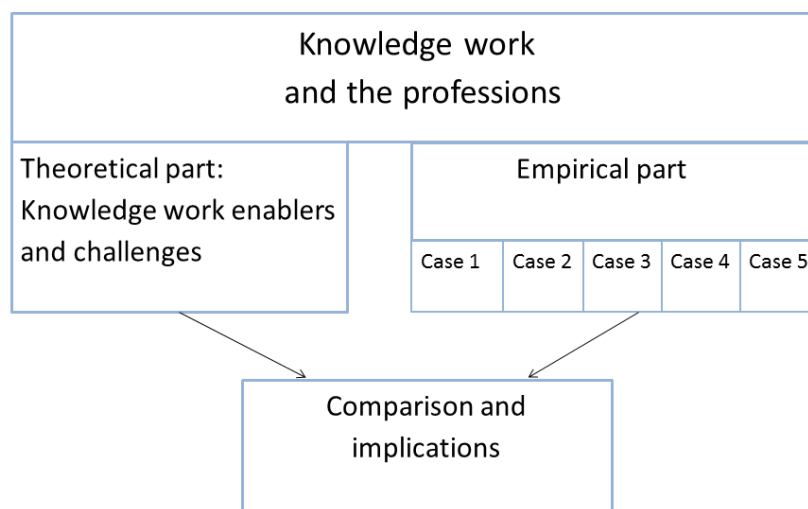
To sum up the previous discussion, this study can be characterised as a qualitative research and it is based on the hermeneutic idea of science. The research data consists of relatively few empirical cases. This kind of a research is typically carried out as case study research. According to Koskinen et al. (2005, pp. 154-157), the idea in the case study is to examine one or a few cases. Yin (1994, p. 13) defines that “a case study research is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. The case study research may include a single- or multiple-case studies (Yin, 1994, pp. 14-15). These cases are the source of new ideas and hypotheses as well as they can be used to test and criticise existing theories and studies. Particularly, single-case study is useful when the case or phenomenon is unique and critical. (Yin, 1994, p. 39.) It may confirm, challenge or broaden the theory behind the case. Moreover, a single-case study may be an extreme case or somewhat unique case and thus, this kind of a research generates new relevant information. Multiple-case studies, on the other hand, rely on multiple sources of evidence and provide better evidential value and replication. (Koskinen et al., 2005, pp. 154-157.)

This study could follow the single case study method but also the multiple case study aspect. The both viewpoints are possible to justify but the choice depends on the objectives and phenomenon of the study. In this study the research phenomenon is the knowledge work enablers and barriers and this is analysed through the different professions. Hence, the case is not the profession in general but rather five different professions. As a consequence, this study uses multiple-case study -method. The chosen professions are seen as distinct cases which will be examined first separately to grow awareness of knowledge work characteristics from the individual point of view. Finally, the cases are analysed together and compared with one another. In addition to case study research method, this study follows partially a conceptual research method. Particularly, the theoretical part of the study complies with the conceptual literature review. The purpose of this part is to define the concepts comprehensively and to get a holistic picture of the phenomenon. This is needed at the later stages when the understanding gained theoretically and empirically is analysed and compared together.

The research methods are needed to execute the research strategy in practice. Olkkonen (1994, pp.64- 65) states that the research methods refer to a set of scientific techniques for investigating the phenomenon, acquiring new knowledge and modifying the knowledge. There are various research methods which may serve the attainment of the research objectives. The use of the particular methods is not limited to certain research strategy. Therefore, it is important to clarify which research methods support the best the chosen research strategy and lead to the achievement of the research purposes. The research methods, the execution of the empirical research and the data analysis methods are described in chapter five.



The research process of this study is illustrated in Figure 1. The process begins with a literature review. This will aim to obtain a broad and comprehensive picture of knowledge work and the characteristics influencing it. Furthermore, the study gives a definition for a profession and illustrates the elements that affect the fact that one can actually talk about the profession. On this basis, the selected professions are more justified to represent knowledge work professions in this research. In this part, the chosen five professions are also described separately in order to understand their characteristics in general level. On the whole, the theoretical literature review constitutes an umbrella for the entire research and it supports the later empirical part of the study.



**Figure 1.** The research process of this study.

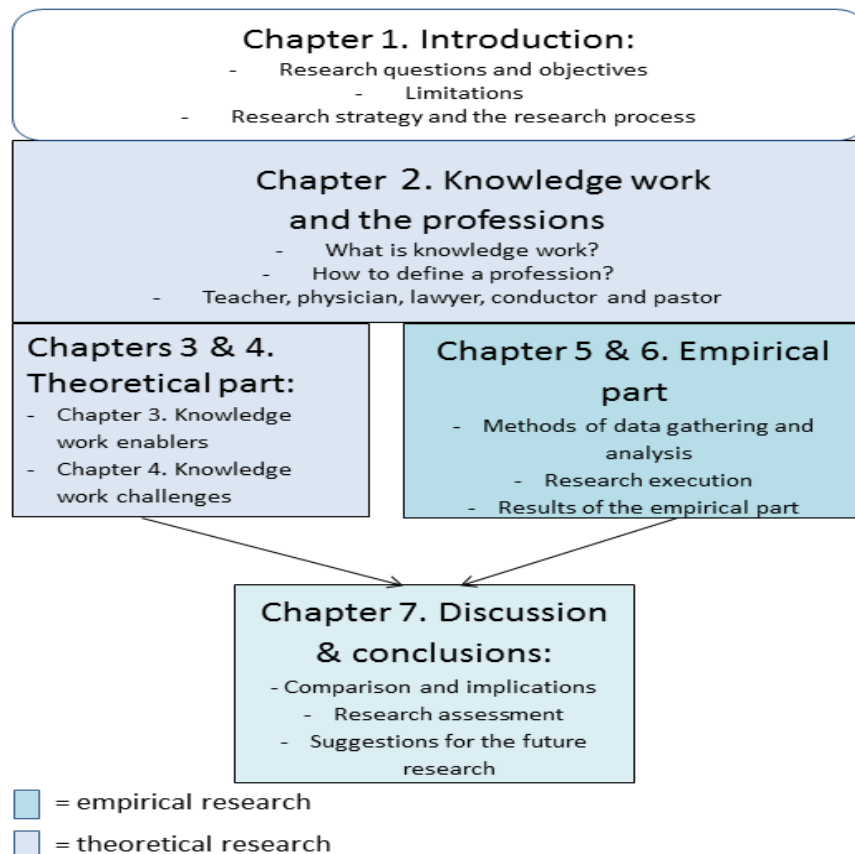
As shown in the figure, the research is then divided into two separate parts: the theoretical part and the empirical part. With this division, the researcher's knowledge does not affect and lead the empirical part too much. In this way, the progression of the empirical stage is not excessively dependent on the researcher and the results are hence more reliable. On the other hand, there may also arise some new elements affecting knowledge work that were not found in the literature. The theoretical part consists of a general-level analysis of the challenges and the enablers of knowledge work. This section is based mostly on the literature review. The literature consists of journal articles and the books concerning the different characteristics of knowledge work, such as elements affecting positively and negatively the knowledge work. In addition, the literature review discusses the professions from different angles. The thesis refers also to the older classic studies of these fields. On the other hand, knowledge work as well as the enablers and challenges of knowledge work are also examined empirically by interviewing narratively the knowledge workers who represent the chosen professions. The professions are seen as different and individual cases.

In the final stage of the research process, the theoretical and the empirical findings are compared and analysed as a whole. Comparing the empirical findings with the results presented in the existing knowledge work literature, it is ascertained which of challenges and enablers are realised and actually occurred. The case findings are also compared with one another and the empirical results are interpreted by means of the literature. It will be discussed whether the encountered challenges and enablers are similar to different professions or whether they vary in certain cases. Based on the findings of this research, the more extensive survey, considering knowledge work, can be prepared for a large sample of the knowledge workers.

Finally, the quality of this study will be evaluated by following Yin's (1994, p. 32-37) criteria for judging the case study research designs. The criteria consist of four different elements – construct validity, internal validity, external validity and reliability – that test the quality of this research. Particularly, the reproducibility of this study may become a challenge. On the other hand, this research does not aim to prove anything fully and completely but merely describe and consider the phenomenon.

## **1.5. Outline of the study**

The structure of this study follows mainly the research process which was presented earlier. The outline of the thesis is illustrated on chapter level in Figure 2. It also describes which chapters are theoretical or empirical in their nature. Chapter one describes the background of this research field, defines the research strategy and explains the limitations and the scope of this study. In addition, chapter one determines the research questions and the purpose of this study.



**Figure 2.** The outline of this study.

Chapter two begins with giving an overview of knowledge work and describes the different characteristics of knowledge work. In addition, chapter two examines professions and deliberates the five professions that have been chosen for the further analysis of this study. Finally, this chapter discusses the different knowledge work professions that have been presented in the literature and justify why the five chosen professions may be examined from the knowledge work perspective.

Chapter three and four analyses theoretically the knowledge work enablers and challenges. This is done in general level and does not particularly emphasise the chosen knowledge work professions. With this literature review, the latter empirical findings may be compared with the results presented in the literature.

Chapter five illustrates the empirical part of the research and starts with the definition of the methods of data gathering and analysis. It also describes how the interviews have been conducted. Chapter six presents the findings from the narrative interviews. Finally, chapter seven summarises the theory and the empirical part and presents the conclusions of the thesis.

## 2. KNOWLEDGE WORK AND PROFESSIONS

Knowledge work can be discussed as an individual characteristics and activity. This aspect focuses on what the knowledge workers actually do in their daily work routines. On the other hand, knowledge work can be analysed from the perspective of different professions. This thesis approaches knowledge work from both sides. First, knowledge work is defined and analysed generally. This part of the study strives to provide an answer to the following questions: What is knowledge work and how to define it? What are the typical characteristics of the knowledge workers and how they differ from manual workers? After that the study analyses the professions. This section will sum up the elements that define a profession. Thereafter, knowledge work and professions are brought together and knowledge work is analysed from the perspective of chosen professions.

### 2.1. What is knowledge work?

According to Reinhardt et al. (2011, p. 150) knowledge work has become a significant driver for current research since Peter Drucker (1957) presented the shift from manual work to non-manual work. In classic manual work, the physical materials are transformed into tangible products, whereas knowledge work is a more cognitive process (Reinhardt et al., 2011, p. 158). In addition to Peter Drucker, Fritz Machlup and Daniel Bell can be considered as the pioneers in the study of knowledge work. Schement and Lievrouw (1984, pp. 321) discuss that Machlup presented the term “knowledge producers” in 1960 and explained the role of knowledge in economic growth. Bell’s theory in 1970 was based on the notice that the service sector had become more dominant and there were core workers (knowledge workers) in services who create new knowledge. (Schement and Lievrouw, 1984, pp. 321-322.)

In literature (see e.g. Drucker, 1999; Despres and Hiltrop, 1995), knowledge work has often been compared with manual work in terms of task structure and skill requirements, and therefore the general insight of knowledge work is relatively easy to create. However, the researchers have struggled to provide an exact definition for knowledge work. Indeed, there are numerous definitions for knowledge work and it can be discussed from various perspectives (see e.g. Bosch-Sijtsema et al., 2009; Pyöriä, 2006).

One way to examine knowledge work is to analyse the characteristics of the job content. In this case, the elements such as innovation and creativity at work, the use of

information systems, the proportion of teamwork and individual work are discussed (see e.g. Bosch-Sijtsema et al., 2009; El-Farr, 2009). Other way to analyse knowledge work is to study it from the individual perspective. Here, the factors like the educational background and the ability to apply knowledge are of interest (see e.g. El-Farr, 2009). Knowledge work may also be examined at the extent to which the knowledge work is flexible and autonomous so that the person may perform his/her tasks in spite of the time and location (see e.g. Perotti et al., 2010). On the other hand, knowledge work may be discussed from the viewpoint of different professions (see e.g. Kelloway & Barling, 2000). This study deals with all these aspects with particular emphasis on the viewpoint of the professions. The review begins, however, retrospectively in order to understand why knowledge work has risen to such an important role in modern societies.

According to Davenport (2005, p. 4) the increase of computers and information over the last half-century has generated a need for workers who have an ability to produce information and apply it. Pyöriä (2006a, p. 56) discusses that the production and the consumption of information goods and services have increased considerably since 1950. For instance, communication systems constitute the fastest growing and the most potential business in the most nations. In addition, knowledge work has become a major trend among the Western labour markets as well as a key factor that distinguishes competitive economies from their competitors. (Pyöriä, 2006a, p. 56) Therefore, the rise of knowledge work is not the managerial or organisational issue only but rather a matter of cultural and social transformation (Pyöriä, 2006a, pp. 9-10).

A present knowledge age is largely based on the organisations' ability to use knowledge to produce new knowledge goods and services. However, this process is not owned by an organisation but an employee in the organisation. Indeed, the knowledge products are dependent on the employee's ability to acquire and apply information. (Despres and Hiltrop, 1995, pp. 10-11.) Therefore, knowledge work and the knowledge workers have become the key resources and success factors for modern organisations.

Knowledge workers are often compared with manual workers or other traditional forms of employment. Table 1 summarises a comparison between these workers (presented by Despres and Hiltrop 1995, p. 13). According to this summary, knowledge workers have gained a high education from outside the organisation while manual workers have been taught and trained within the organisation. Knowledge workers identify more strongly with their peers, networks and professions than their organisations while manual workers are generally loyal to their organisations and its career systems. In addition, knowledge workers have more specialised and deeper skills to solve complex problems and issues and serve the customers. Manual workers, in turn, have gained relatively narrow and often functional skills that help them to carry out their task as effectively as possible. Knowledge workers are also more critical to the long-term success of the organisation.

**Table 1.** A comparison of knowledge work and manual work (adapted from Despres and Hiltrop, 1995, p. 13).

Dimension	Knowledge work	Manual work
Employee's career formation	External to the organisation through years of education and socialisation	Internal to the organisation through training, development, rules and prescriptive career schemes
Employee's loyalty	To profession, networks and peers	To the organisation and its career systems
Skill/knowledge sets	Specialised and deep	Narrow and often functional
Focus of work	Customers, problems, issues	Tasks, objectives, performance
Impact on company success	A few major contributions which are strategically important in long-term perspective	Many small contributions that support the master plan.

The difference between knowledge worker and manual worker were described above but it does not explain fully what knowledge work actually is. Pyöriä (2006a, p. 10) says that broadly defined, knowledge work means manipulating symbols. Naturally, all work involves a symbolic manipulation to some extent but in case of knowledge work this is related to knowledge. Davenport (2005, p. 10), on the other hand, states that knowledge work means simply thinking for living and knowledge workers live by their wits. These definitions presented by Pyöriä and Davenport are relatively broad due to the fact that knowledge work can be discussed from various perspectives and it takes place in many different contexts. However, in this study knowledge work is understood and defined as Bosch-Sijtsema et al. (2009, p. 533) presents the concept. Knowledge work is about creating, sharing and applying knowledge and it is done by talented, highly educated and autonomous individuals. They use different information tools and models which generate complex, intangible and tangible results (Bosch-Sijtsema et al., 2009, p. 533.)

Knowledge work can also be described as an iceberg in which the visible part depicts the routine tasks whereas the hidden part illustrates the knowledge work actions that are acted inside the person's head (Efimova, 2004, pp. 3-4). For instance, understanding, interpretation, knowledge integration, new idea generation and the knowledge application are examples of the invisible knowledge work. Efimova (2004, pp. 3-4) says that particularly this part of the knowledge work iceberg is relatively difficult to discern

and measure since the results of this kind of knowledge work are typically unique. Usually, one can notice the explicit products of knowledge work, such as reports and designs, but not the entire process of generating them (Drucker, 1999, pp. 84-86).

Knowledge work can also be discussed in terms of different knowledge work actions. These characteristics move beyond the occupational and educational status and explain what the employee actually does at work and what the knowledge work is all about. All of these actions are in some way related to knowledge and these actions indicate the typical hidden part of the ice-berg that knowledge workers carry out at work. Table 2 lists some knowledge work actions that are often presented in the literature.

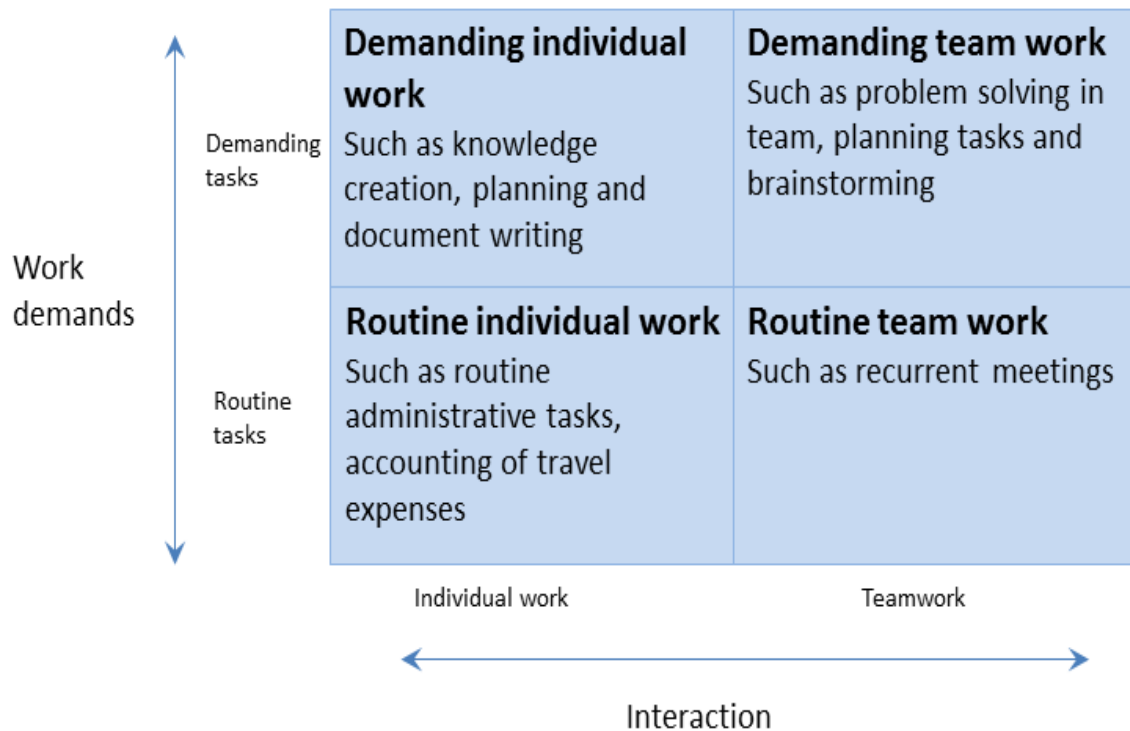
**Table 2.** Knowledge work actions

Research/Source	Knowledge work actions
Reinhardt et al., 2011	Acquisition, analyse, authoring, co-authoring, dissemination, expert search, feedback, information organisation, information search, learning, monitoring, networking, service search
Efimova, 2004	Finding and organising ideas and information, collaboration and conversation, establishing and maintaining relations with others
Holsapple and Jones, 2004	Knowledge acquisition, selection, generation, assimilation, emission, measurement, control and coordination, leadership
Bosch-Sijtsema et al., 2009	Knowledge building and maintenance, knowledge acquisition, conversation and collaboration, thinking, organising knowledge
Ruggles, 1998	Generating new knowledge, accessing valuable knowledge, using knowledge in decision making, embedding knowledge in processes/products/services, representing knowledge in documents, facilitating knowledge growth, transferring existing knowledge

To summarise the key characteristics of knowledge work actions presented in Table 2, the key knowledge work actions are related to learning, knowledge acquisition and sharing, analysis, collaboration and communication with others. According to Reinhardt et al. (2011, p. 158), learning, in short, means acquiring new knowledge, skills or understanding through informal or formalised learning processes during the execution of work or the training courses. Knowledge acquisition indicates information gathering in order to develop skills or obtain new assets. Analysis refers to thinking or examining something comprehensively to understand it. Knowledge sharing indicates spreading and exchanging the information. Finally, collaboration and communication refer to interacting with other people formally or informally. (Reinhardt et al., 2011, p. 158.) Later on during this study, these knowledge work actions will be examined together with the knowledge work enablers and challenges. Purpose of this is to find out whether these actions are somewhat related to the enablers or barriers of knowledge work.

Knowledge workers need autonomous time to generate new ideas and thoughts by using their knowledge and skills. On the other hand, knowledge work includes also communication and interaction with others. This can be seen as process in which the knowledge worker's intangible and embedded knowledge is externalised and shared to the others in forms of documents, presentations and conversations (Virtaharju, n.d., p. 4). In addition, even though knowledge work is perceived as high level cognitive work, the knowledge workers perform also mundane tasks such as retrieving information, telephone calls and emails. Both routine work and cognitive work can be done either individually or in team. Knowledge work is not only working in solitude as the work today has shifted toward collaborative team work. According to Peterson and Beard (2004, p. 164) the teams are necessary to carry out innovative and creative knowledge work which requires interaction. Figure 3 illustrates different working modes that knowledge work involves. It separates the demanding work tasks and routine tasks as well as individual work and teamwork. It is, however, important to remember the fact that these modes can be done in parallel.





**Figure 3.** Different kinds of working modes (adapted from Virtaharju, n.d., p. 5).

As mentioned before, knowledge work may be conducted in different places and in different modes. Professional work consists of individual work, face-to-face communication with colleagues and indirect communication through emails and phone calls. Bosch-Sijtsema et al. (2008, pp. 8-9) and Virtaharju (N.d., p. 4) explain that knowledge workers work solitude, asynchronously, virtually online and in face-to-face collaboration with others. All of these working modes are essential for the success of the work but nowadays they are nearly impossible to separate. Indeed, working in alone may include virtual asynchronous collaboration with colleagues and thus, the nature of knowledge work has become more blurred (Bosch-Sijtsema et al., 2008, p. 8-9; Virtaharju N.d, p. 4).

Venezia et al. (2008, p. 61) argue that knowledge workers spend a significant portion of their time out their offices, either traveling, working at customer sites or at home. These work environments may have relatively different facilities than the traditional office space assigned to the knowledge workers (Venezia et al., 2008, p. 61). The role of communication and information technology has increased considerably to support the knowledge workers to work anywhere, anytime, anyplace (Bentley and Yoong, 2000, p. 345). Accordingly Churchill and Munro (2001, p. 4) argue that the employees who are often outside the office environment rely on stable technical and social infrastructures to get their daily work done. Bentley and Yoong (2000, p. 351) explain that the knowledge work time consists of

- Knowledge sharing time
- Thinking/quiet time
- Research/writing time
- Operational/functional time

These all can be done at the office but also outside the office environment when the information technology has an important role in supporting the knowledge work tasks. According to Bentley and Yoong (2000, p. 351), the knowledge sharing time is about offering opinions, interpreting analytically and generating new ideas. This can be done by electronic communication, written communication or face-to-face (Bentley and Yoong, 2000, p. 351). Davenport and Prusak (2000, p. 14) for example say that through e-mail, groupware, Internet, intranets and computers, the knowledge workers may be connected to each other over the distance. Thinking/quiet time and research/writing time can be described as reviewing, preparing, writing and planning work for which the knowledge workers need quiet and uninterrupted time. (Bentley and Yoong, 2000, p. 351.) Bentley and Yoong (2000, p. 352) explain that particularly the home environment suits well to this kind of work. The knowledge sharing time as well as operational/functional time may involve interaction with others so that the knowledge worker may communicate with the customer or colleague who is geographically distant. On the other hand, they may work face-to-face together outside the office environment or then they may work apart from each other so that both are away from the office environment. Bentley and Yoong (2000, p. 352) say that in case of the operational/functional time, the knowledge workers tend to carry out the tasks in which they need to use the secretarial or administrative support while they are at the office but take home the tasks that do not need secretarial assistance (Bentley and Yoong, 2000, p. 352). Therefore, the knowledge workers have become more mobile and at the same time the balance between work and non-work has blurred (Pyöriä, 2003, p. 178).

## **2.2. How to define a profession?**

The sociological discussion is generally characterised by two kinds of perceptions of the role and status of the professions in society (Mykkänen and Koskinen, 1998, pp. 2-3). So, there are two key profession theories which have directed the profession research. The first aspect, according to Mykkänen and Koskinen (1998, pp. 2-3), states that the autonomy of the professions is based, on one hand, on their specialised knowledge and, on the other hand, on the importance for society to let them decide independently the standards of the profession. The performance of the professional can be assessed by other representative of the same profession. The public authority has given the professions the self-determination to control themselves since they play a vital role for society. The other aspect is so called monopolistic approach which sees professions as monopolies that aspire to their own interests. Therefore, some tasks are exclusive for the

certain professions. The monopolisation is done for example by limiting the access to the education. (Mykkänen and Koskinen, 1998, pp. 2-3.) In addition to these theories, there are also other profession theories, such as post-Weber profession theory, Andrew Abbott's approach to professional system and Steven Brint's perspective to the professions. These have developed during the last few decades but this study discusses the professions through the theories presented above. The discussion will start off retrospectively by explaining the factors contributing to the development of the professions.

Etymologically the word "profession" means proclaiming something publicly (Pellgrino, 2002, p. 379). Helander (1993, p. 36) clarifies that profession has originally been associated with taking an oath for a religious order. According to Mykkänen and Koskinen (1998, pp. 9-10), the professions were arisen gradually to the context of the university system during the Middle Ages. Historically the most important profession was the clergy but there were also two other important professions, physicians and lawyers, in the medieval university system (Mykkänen and Koskinen, 1998, pp. 10-11; Helander, 1993, p. 36). Even though, some professions are historically really old and their roots are traced to the times of Ancient Greece and the Middle Ages, a modern profession has been formed not until the mid-1800s (Kontinen, 1998, p. 30).

Historically professions have not only been learned but they have also been a privilege of the rich and fortunate people. Nowadays, professions require a specialized knowledge-base and the professionals can be called as expert type of specialists. (Kontinen, 1991, pp. 217-218.) Typically, each profession has a control over the complexity of the specialised knowledge and professions have given the empowerment for using that knowledge. They are also required to transfer their knowledge by teaching the future practitioners. (Cruess et al., 2002, pp. 208-209.) In addition, professions enjoy a great appreciation as well as the power of decision and they have an authoritative position over the customers and other occupational groups (Mykkänen and Koskinen, 1998, p. 1).

According to Mykkänen and Koskinen (1998, p. 31), the empowerment is usually linked to the university degree so that the examination guarantee the right to use the specified knowledge and to perform the tasks. These tasks are exclusive to the certain profession so that if one does not have the degree, he or she is excluded from performing the tasks. Carrying out these professional tasks, the individual is also advantaged for numerous privileges and social rewards such as for great reverence, self-determination in work performance and a considerable remuneration for the work. (Mykkänen and Koskinen, 1998, p. 31.)

Helander (1993, p. 39) says that a "profession" can be described with a typological and functional definition. Next, the chosen professions are analysed using the typological

definition and after that they are studied by using functional definition. According to typological definition, there are professions with specific characteristics which can be divided from those of the non-professions. This definition compares professions with non-professions and lists features that separate them from each other. (Helander, 1993, p. 39.) In this study, the profession is understood as Helander (1993, p. 40) and Erämaja (2006, p. 61) define the profession. According to Helander (1993, p. 40), the most common aspects that can be regarded as characteristics for professions in relation to non-professions are

- 1) Professions are based on theoretic knowledge
- 2) Knowledge-base is achieved through the several years of education, vocational training and experience
- 3) A qualification test is required in order to perform the profession
- 4) The ethical code and set of norms guide the professions
- 5) Altruism is typical for the professionals
- 6) Professionals are usually members of the professional associations.

Brint (1994, in Mykkänen and Koskinen, 1998, pp. 21-22) has categorised professions into five different groups based on the content of their work. The business services constitute the first group and this group includes for example corporate lawyers. The second group is made up of the professions of applied sciences. Culture and communication professions form the third sphere. This category includes for example the music and media professionals. The civic regulation sphere embodies the professions that apply their knowledge in the regulative tasks in public sector. These professions are for instance judges. The fifth category is human services sphere which is relatively broad group and it is composed of very different professions. This group includes professions such as teachers and surgeons. (Brint 1994, in Mykkänen and Koskinen, 1998, pp. 21-22.)

In addition to the Helander's definition the other viewpoint used in this thesis to understand professions is to see the segregation of different professions and the social operating systems which Erämaja (2006) presents. Erämaja (2006, p. 61) discusses that one may talk about the profession, when it is professionalised and the certain tasks are defined exclusive to the profession. For example, the physicians have the key role in health-care system whereas teachers have got a monopoly in the education system. Similarly, the judge and lawyers enjoy the ruling status in the judiciary while priests have important role in the religion system. (Erämaja, 2006, p. 61.) In addition, professionals work typically with the important themes, such as illness, guilt, grief, education and guidance. In such situations people may become dependent on the professionals to some extent and this requires the certain communication and interaction skills from the professionals. (Erämaja, 2006, p. 63.) Erämaja's discussion is used as the

other main definition for the profession in addition to the Helander's typological definition.

The term "profession" is closely related to another term, namely "professionalism". In principle, it can be defined a social or political ideology. Helander (1993, p. 58) explains that as an ideology professionalism refers naturally to different professions but also to professionalization in which non-professions become the professions. Professionalism includes the aspects such as professional knowledge and service ideals, professional occupation and career, and the characteristics of professional work. Professional knowledge and service ideals highlight the ethical and altruistic attitudes of professionals. (Helander, 1993, p. 59.) These kinds of professionals are committed to apply their knowledge and skills unselfishly for the humanity. On the other hand, Helander (1993, p. 59) continues by saying that rather many people run for the professional career in order to obtain rewards, high income and the social prestige.

The values of the professionalism determine also the nature of the work. This is for example related to the awareness of the high requirements of knowledge and skill. It includes also the professional pride and the understanding of the superiority of the profession compared to others. (Helander, 1993, p. 59.)

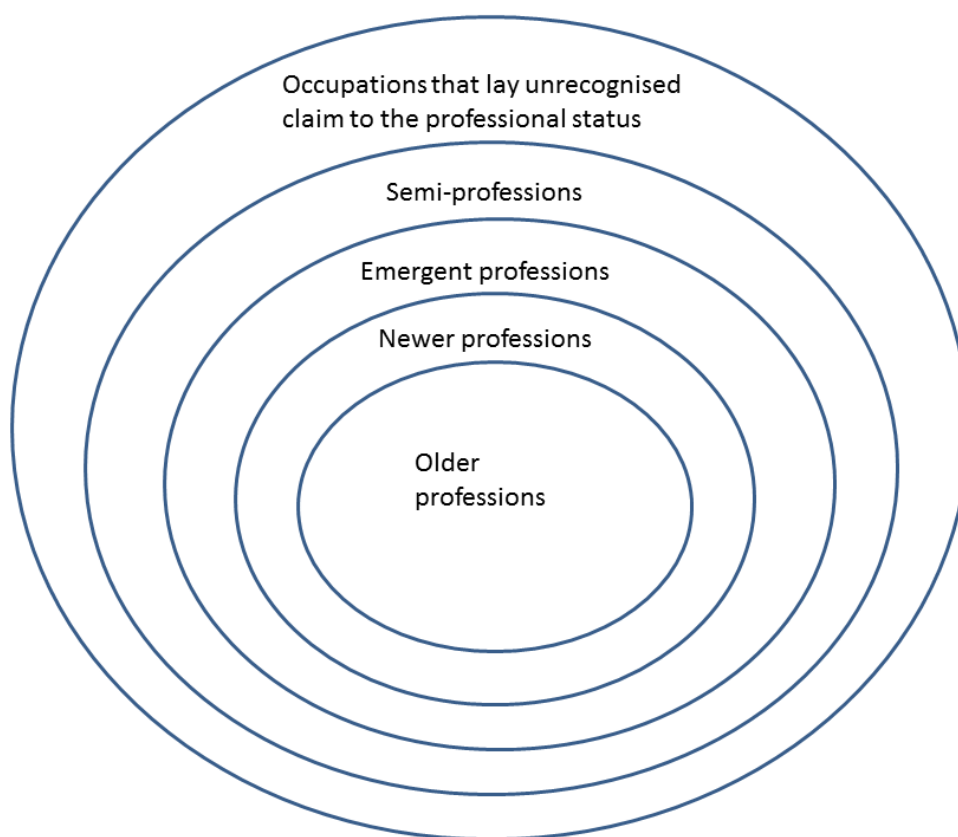
According to the definitions presented above, at least physician, pastor and lawyer are undoubtedly regarded as professions. They are traditional professions and often considered as typical examples when speaking about professions. They all have got a highly theoretic knowledge base through the university education and experience. Moreover, they are required to pass the certain qualification test in order to perform the professional tasks. For example, pastor candidates need to get ordained as a pastor prior to performing the religious ceremonies. These professions are guided by the ethical codes and norms and their work is closely related to the important themes that Erämaja (2006, p. 61) mentioned. As a consequent, altruism and the desire to help are typical for the professionals.

Based on the Brint's categorisation (1994, in Mykkänen and Koskinen, 1998, pp. 21-22) and Erämaja's definition, the teachers and conductors can be seen as professions. Teachers fit into the fifth sphere in the Brint's categorisation while conductors may be considered as media professionals which form the culture and communication sphere. Moreover, when considering the Erämaja's definition for the profession, it can be noticed that the certain tasks are defined exclusive to teachers and conductors. Indeed, teachers are responsible of the education and training system while conductors manage exclusively music orchestras. On the other hand, these professions also fulfil most of the Helander's (1993, p. 40) requirements for the profession. Both the conductors and the teachers use their theoretic knowledge in their daily work tasks which they have got through the several years of the education and the vocational training. Moreover, ethical

codes and norms set the framework for the profession of teaching, and the teachers take responsibility over the continuous learning and improvement of students' knowledge base. Teachers also take part in the professional community so that they contribute to advance the knowledge of the entire profession. (Kari, 1996, p. 15-16.)

As Helander (1993, p. 39) says, the professions can be explained with the typological definition which is one of the so called feature definitions. Here, physicians, lawyers, pastor, teachers and partly conductors were defined with typological definition. In addition to the feature definitions, there are functional definitions which can be used to justify that the conductor may be considered as a profession. Helander (1993, p. 46) discuss that the functional definition is based on the idea that the certain profession fulfils the important role for the continuity of the society or community. This definition is relatively similar to Erämaja's definition which emphasise the segregation of different professions and the social operating systems so that the specific tasks and operations are exclusive to the certain profession. According to this, it can be argued that the conductor continues the tradition of the western art music. Conductor is a respected and relatively old profession and its roots are traced to the times of classicism. Conductor's work is autonomous and he/she makes the artistic decisions about the composition which he/she communicate non-verbally to the orchestra and the audience.

As long as the professions have been investigated, there has been a heated debate whether the occupational groups like teachers, social workers and nurses can be considered as professions or whether they are so called semi-professions. According to Howsam et al. (1976, p. 17-18), the semi-professions have lower occupational status, shorter training period, they lack societal acceptance and autonomy. Furthermore, they possess a less specialised knowledge-base and skills and they do not take part in decision making process (Howsam et al., 1976, pp. 17-18). Figure 4 illustrates the levels of professions and particularly the relationship between professions and semi-professions. It also clarifies the relative proportions of different professions and hence, indicates that there are substantially more occupations that lay unrecognised claim to professional status compared to the actual professions.



*Figure 4.* Levels of professions (Adapted from Howsam et al., 1976, pp. 16-17).

The figure illustrates that there are relatively few older professions while new professions are emerging quickly. Emergent professions are groups among which the professionalism and the professional pride are rather strong and they aim to obtain a professional status. The next sections will analyse the chosen professions more carefully and discuss why they are considered as professions in this research. The analysis will start off by discussing the knowledge work professions and the knowledge work business fields in general level.

### **2.2.1. Knowledge work professions**

According to Mykkänen and Koskinen (1998, pp. 13-15), the nature of the work has changed slightly along the capitalism. First, the production started to emphasise more and more the technology which needed the employees that were able to design the production technology and to coordinate the production system (Mykkänen and Koskinen, 1998, pp. 13-15). This led to an increase in the demand of the engineers. Mykkänen and Koskinen (1998, pp. 13-15) explain that as the organisations began to grow, their administration and management became more complicated accordingly. Gradually, the need arose for the financial-, planning-, accounting- and tax specialists (Mykkänen and Koskinen, 1998, pp. 13-15). This chapter finds out the fields in which

knowledge work is carried out. Moreover, it examines what professions can be found in these fields and analyse how their tasks are related to knowledge work.

Von Nordenflycht (2010, p. 158) explains that in the 1960s the organisational sociologists began to study the nature of organisations of professional. They labelled these organisations as professional organisations or professional bureaucracies. These professionals had great autonomy at their work and they participated in organisational governance. In 1990s emerged new research interests alongside the research concerning professional organisations. They were concerning professional service firms and knowledge-intensive firms. (Von Nordenflycht 2010, p. 158.) These firms have in common their dependency on well-educated and skilled personnel. Moreover, knowledge is their primary resource being both the input and output the production processes. (Sverlinger, 2000, p. 27.) Employees in the professional service organisations can be considered to perform knowledge work (Sverlinger, 2000, p. 28) and therefore, it is important to take this aspect into the discussion.

In addition to the rise of the research in field of professional service firms it needs to be noticed that the professionalism as well as knowledge-intensity have also strengthened in traditional industrial sectors Pyöriä (2006b, p. 25) discusses that the knowledge and skills requirements have grown in many different occupations. The birth of knowledge society has blurred the traditional social hierarchy of the division of labour which comes originally from the industrial period. As the knowledge production, procession and transformation have become a part of the job description for more and more people, the traditional professions have lost their special status (Pyöriä 2006b, p. 26; Mykkänen and Koskinen, 1998, pp. 13-15).

Pyöriä (2006b, p. 24) explains that people often believe that knowledge work takes place only in the innovative technology organisations, such as in Nokia, in the research and development departments or in the academic research centres. This is not however the case. Davenport (2005, p. 11) describes that knowledge workers do not work only in the knowledge-intensive industries, but they may work everywhere from a small start-up firm to large global corporations. Their work requires them to collaborate with others in different functions, physical locations, time zones and organisations (Davenport, 2005, p. 12).

It is impossible to specify how many knowledge work professions exist. However, many researchers have expressed different reasoning for knowledge work professions. Davenport (2005, pp. 5-6), for instance, presents the following classification as the fields of the knowledge work professions.

- 1) Management
- 2) Business and financial operations



- 3) Computer and mathematical
- 4) Architecture and engineering
- 5) Life, physical, and social scientists
- 6) Legal
- 7) Healthcare practitioners
- 8) Community and social services
- 9) Education, training, and library
- 10) Arts, design, entertainment, sports, media.

There may also be different professional service firms such as law, architecture and accounting firms within these fields presented above. Von Nordenflycht (2010, p. 156) adds engineering consulting, advertising, physician practices, education and teaching and media production firms to the list. These firms are typically related to the archetypal conception of professions, strong professional ideology and emphasis on individual self-regulation (Pinnington, 2011, p. 444). The employees' work is closely related to problem solving and creativity (Sverlinger, 2000, p. 28) and the outputs of these firms rely on a substantial body of complex knowledge (Von Nordenflycht 2010, p. 159).

Sulek and Maruchek (1994, p. 5) also say that knowledge work includes professions such as academics, physicians, lawyers, engineers and scientists. These workers have high level of education, experiment and the organisational status. Their work is intangible in nature and requires cognitive skills, creativity and innovation. (Sulek and Maruchek 1994, p. 5.) Knowledge is the primary resource of their work and it is acquired from external and internal sources. The knowledge work professionals' output may include written reports, oral presentations, drawings, software and specifications. All of these results are related problem solving and they constitute comprehensive collections of processed knowledge. (Sverlinger, 2000, p. 33.)

### **2.2.2. Teacher – A profession or a semi-profession?**

As mentioned before, the teachers have struggled to gain a public acknowledgement of their position as a profession but they have considered as the representatives of the semi-profession. According to Krejsler (2005, p. 342), they are not considered to possess the wide and specialised knowledge-base that the professions typically own. Indeed, they are considered to have a general knowledge-base (Krejsler, 2005, p. 342; Howsam et al., 1976, pp. 19-20). Furthermore, it is also argued whether they have a professional autonomy in their work. Krejsler (2005, p. 343) for example explains that teachers act independently in their classrooms within the fundamental framework of a government regulations. Thus, teachers and teaching are tighten to comply with many statutes and the national curriculum.

However, teaching can be seen as a multidimensional profession. According to the different definitions for a profession presented in the previous section, teaching full-fill the following characteristics for a profession. The teaching profession requires a management of a broad knowledge base which is achieved through several years of education and long periods of vocational training. In addition, teachers need to develop the syllabus actively and set attainable and worthwhile learning objectives for students. They also commit to guide and encourage students to achieve those learning objectives. Moreover, teachers take responsibility over the continuous learning and improvement of students' knowledge as well as their own skills. Teachers take part in professional community so that they advance the knowledge and instructional programs, and improve the practice of the colleagues in the field. They also work actively with the families by discussing, providing and receiving feedback. (Barringer, 1993, p. 22.)

Hargreaves and Fullan (2012, p. 14) also list requisitions for teaching. According to this categorisation

1. Teaching requires high level of education and long periods of training
2. Teaching is technically sophisticated and difficult
3. Teaching demands continuous improvement
4. Teaching is a collective accomplishment and responsibility
5. Teaching entails wise judgement based on experience and evidence
6. Teaching is not replaced by online instruction but it rather maximises, mediates and moderates online instruction.

These aspects serve well the definitions presented earlier and indicate that teaching may be regarded as a profession. While the society has developed, teaching has actually become a challenging and socially important profession. Analoui (1995, p. 19) for example states that teachers' work may even be regarded a managerial work since they must share information constantly, they need to have got certain skills and they possess professional attitude and behaviour at their work.

Teachers should create their own pedagogy and idealise an explorative teaching style. This kind of teacher is able to adapt to quickly changing situations and considers his/her work challenging. Moreover, he/she reflects and assesses his/her own work constantly. Analysing his/her own work, the teacher may understand the reasons for own behaviour and is able to do better choices at work. (Kari, 1996, p. 50-52.) From knowledge work point of view, this also helps teachers to develop and improve their own learning and entire cognitive process at work.

Hargreaves (1994, pp. 165-166) discusses that even though teachers are in daily contact with students' parents, teacher colleagues and the other school staff, they work mainly in solitude. Teaching is typically connected with autonomous working in the isolated

environment of their own classroom (Hargreaves, 1994, p. 167). In this way, they are not evaluated by the supervisors and other teachers and they are not able to see what their colleagues are doing. In addition, the teachers' duty of confidentiality seems to emphasise the autonomous working.

Teaching is also seen as a strongly ethical profession. According to Kari (1996, p. 50-52), the teacher must constantly think about the values and understand the ethical norms which he/she applies to students, teaching and his/her own pedagogic personality. Ethical professionalism makes the teaching highly challenging but at the same time rewarding. Teacher acts as a role model for a student who seeks the values and therefore, teacher's behaviour and modes become important. Additionally, teachers' professional ethics sets responsibility to the students, their parents, work community, society and other official actors. (Kari, 1996, p. 50-52.)

### **2.2.3. Physicians – continuous learning and commitment to excellence**

Medicine is along with law and the clergy one of the most important professions of our time. The roots of the modern medicine are traced to the times of Ancient Greece and the profession has developed into its present state through various historical phases (Hilton and Southgate, 2007, p. 265). The long history of medicine has begun from the Hippocratic medical school in the Kos Island. The education included medical information that everyone was not able to handle and understand. In addition, the legalisation of acting as a practitioner was controlled as well as the transformation of medical know-how. (Pasternack and Saarni, 2007, p. 11.) For instance, in Finland there have long been relatively few physicians as the region was part of the periphery of Europe. However, the profession has always been held in great reverence. (Kontinen, 1991, p. 148-152.) The status of the medical profession was particularly affected by the national medical collegium, Collegium Medicum. It developed significantly the medical education which, in turn, attracted the people in the upper social layers. (Kontinen, 1991, p. 154-156.)

Physicians are typically responsible not only for their patients but they are also socially responsible so their work must thus be ethically acceptable. As well as in the teacher's profession, physicians need to reflect their own actions and decisions constantly. In addition, they should be committed to lifelong learning and improvement of knowledge and skills. Calman (1994, pp. 1141-1142) has set some key values that are expected to physicians. These are

- 1) High standard of ethics
- 2) Continuing professional development
- 3) Ability to work in a team
- 4) Concern with health as well as illness

- 5) Patient and public focused
- 6) Concern with clinical standards, outcomes, effectiveness and audit
- 7) Ability to define outcomes
- 8) Interest in change and improvement, research and development
- 9) Ability to communicate.

Calman (1994, pp. 1141-1142) states that from the times of the Hippocratic Oath, the medical practice has related closely to ethical course of action. Actually, it is the one of the key features of the profession and the ethical dilemmas arise constantly in physicians' daily work. Swick (2000, p. 614) explains that the nature of physician's work is active and to large extent self-directed. The work involves the application of specialised knowledge-base and the need to continuously enlarge that knowledge-base. (Swick 2000, p. 614). Continuing professional development is concerned with personal growth and satisfaction with professional work (Calman, 1994, pp. 1141-1142). Ability to work in teams means performing and learning in teams, and it helps to utilise the skills and knowledge of different professions (not only medicine) efficiently. (Calman, 1994, pp. 1141-1142.) Concern with health and illness is possibly the most important role in the physician's work. Physicians are responsible for their patients but in broader sense they should also be concerned of the health care of the entire community.

Calman (1994, p. 1142) discusses that medicine should not stay unchangeable. On the contrary, it should be developed and evolved constantly. The physicians also need to improve their clinical practices regularly and acquire new information. Swick (2000, p. 615) states that competency is an important professional quality. The definition of the profession emphasise the professionals' intellectual work and the specialised knowledge base. These aspects require the physician to maintain the high standard of excellence through constant acquisition of knowledge and the development of new skills (Swick 2000, p. 615). From the patient and public perspective, the clinical standards, audits and the ability to define outcomes assure the constant improvement of the quality of the medical treatment. The commitment to high standards and excellence make life-long learning essential to the medical professionalism (Swick 2000, p. 615).

Ability to communicate is the final element that Calman (1994, pp. 1141-1142) presents. It refers to a two way interactive process between the doctor and the patient, and it has the central role of the physician's daily work. According to Swick (2000, p. 615), the physician deals with high levels of complexity and uncertainty which require independent decision making. The physician needs to be able to independent judgement and decision making in the complex situations, unstable circumstances and with incomplete information. (Swick 2000, p. 615.)

#### 2.2.4. Lawyers – the protectors of justice

Lawyers have traditionally been considered as protectors of justice who support and defend their clients to claim their rights. Nowadays, lawyers need to also have knowledge of business, finance and technology as well as multi-language skills to carry out the legal practice in a globalising world. (Tsai et al., 2009, p. 443.) A typical lawyer is also, according to Daicoff (1996, p. 1390), more achievement-oriented, more aggressive as well as competitive compared to other professionals.

According to Tsai et al. (2009, p. 443), law is a profession that requires regular interaction with the clients and careful analyses of legal issues. Lawyers must to be able to understand the messages and needs of other actors, and make themselves understood in order to gain consensus on the issues and to achieve the common objectives (Tsai et al. 2009, p. 443). Next, the legal professions is analysed through the certain principles presented by the Council of Bars and Law Societies of Europe (CCBE). The council (CCBE 2010, p. 4) sets ten core principles which are common to the whole European legal profession.

- 1) The independence of the lawyer, and the freedom of the lawyer to pursue the client's case.
- 2) The right and duty of the lawyer to keep clients' matters confidential and to respect professional secrecy.
- 3) The avoidance of conflicts of interests between clients and the lawyer.
- 4) The dignity and honour of the legal profession, and the integrity and good repute of the individual lawyer.
- 5) Loyalty to the client.
- 6) Fair treatment of clients in relation to fees.
- 7) The lawyer's professional competence.
- 8) Respect towards the professional colleagues.
- 9) Respect to the rule of law and the fair administration of justice.
- 10) The self-regulation of the legal profession.

The independence of lawyer to pursue the client's case is possible if the lawyer is free – politically, economically and intellectually – in advising and representing the client. The lawyer's performance should not be ruled neither the state and other powerful interests nor the improper pressure of the business associates. (CCBE, 2010, p. 7.) This principle suits well with the definition of profession as the professions typically apply their specialised knowledge and pursue their activities independently. The professions should have an empowerment for using their know-how. Without the independence at work, it is difficult for lawyers to fulfil their professional and legal role (CCBE, 2010, p. 9). CCBE (2010, p. 9) states, that self-regulation may guarantee the lawyers' professional status. Mykkänen and Koskinen (1998, p. 31) also discuss that the empowerment and

independence is usually linked to the right to use the specified knowledge to carry out the tasks that are exclusive to the certain profession.

The second principle emphasise the professional secrecy which is also characteristics of other professions. The clients' cases may consider intimate personal details or valuable business secrets and the lawyer should receive all these information on a basis of confidence (CCBE, 2010, p. 7). If there is no certainty of confidentiality, there may be no trust between the lawyer and the client and this may have an impact, for example, on the quality of the lawyer's work. The third principle advises to avoid the conflicts of interests between different clients or between the client and the lawyer. This is closely related to the ethics of the profession. Lawyer should not serve the clients in the same matter at the same time if there is a risk of a conflict to some extent (CCBE, 2010, p. 7). This principle is, therefore, linked also to the previous described principles, considering independence and the confidentiality.

Mykkänen and Koskinen (1998, p. 1) explain that the professions typically enjoy a great appreciation as well as the power of decision, and they have an authoritative position over the customers and other occupational groups (Mykkänen and Koskinen, 1998, p. 1). In order to achieve this appreciation, the lawyer should be shown to be worthy of the trust. While representing himself/herself as an individual, he/she actually represents the profession as a whole. Indeed, as the lawyer indicates his/her trustworthiness, he/she indicates the public confidence in the profession (CCBE, 2010, p. 8).

According to Helander's (1993, p. 40) definition, the altruism is typical for the professionals. This is seen clearly in the principles presented by CCBE. Moreover, loyalty, which is the fifth principle, is closely related to other principles. Actuating the client's interests and acting as an adviser or as a representative for the client are the most important duties of the lawyer. In addition, the professional competence is critical for the lawyers. As for the other professions, the appropriate education and training are essential for acting in the legal profession. Through the education, the lawyers internalise the professional ideology of law. According to Pinnington (2011, p. 450), the key characteristic, and most important part of the professional ideology, is to understand the legal philosophy and thinking. When the profession is performed in practice, the legal philosophy should, however, be adapted and interpret according to the requirements of the case in question. Pinnington (2011, p. 450). On the other hand, the post-qualification training allows the lawyers to continue the professional development (CCBE, 2010, p. 9). Training may be arranged formally or informally, such as learning on the job. Pinnington (2011, p. 450) discusses that the lawyers need to put in hours of learning on the job and this process needs to be constant while they need to remain current with developments and rapid changes in law and practice.

According to Pinnington (2011, p. 450), the legal profession has remained dominated by professional hierarchies within and outside the organisations. The respect towards professional colleagues is, for example, typical for the legal profession. The mutual respect between the lawyers facilitates the proper administration of justice (CCBE, 2010, p. 9). Moreover, it also develops the bar association and the entire professional community.

### **2.2.5. Pastors – a life-long profession among the congregation**

The parish pastors' essential responsibility is to supply the religious service, particularly Mass and to share the holy sacraments, such as the communion. Moreover, the pastor carries out the religious ceremonies, like baptism, burial, confirmation and officiates at a wedding. Their work also involves different expert, design and development tasks. (evl.fi, 2012.) Therefore, the field of pastors' work is rich and broad as well as the expectations related to them are high.

As the pastor's job is challenging, the criteria for the ordination are high. The bishop and the cathedral chapter make the decision of the ordination, and the bishop officiates at the actual ordination ceremony. In the ordination it is important that the candidate shows commitment to the priesthood and is able to work as the position requires. The candidate should have a theological education and he or she must be a member of the church. The teacher of theological science or religion is also possible to ordain as a pastor. The candidate may be ordained as a pastor for the parish or for example for the other special roles in the church or the chapter. They may also be set responsible for the child and youth work, welfare work or missionary work. (evl.fi, 2012.)

The priesthood is a lifelong profession which is not tied to a person's workplace. The person is a pastor even though he or she would not work for the church. (Kirkon keskushallitus, 2010, p. 1.) As the pastor commit to his or her work and to the teachings of the church, the pastor obtains the boundaries and the framework for his/her work but on the other hand, he/she gets autonomy and broad possibilities to perform his/her work (Suhonen, 2009, p. 36).

A religious work requires four different core competencies. These core competencies constitute of an integrative core, theoretical core, professional core and the minimum core. Integrative core competencies indicate the common know-how of different professions while theoretical core competencies include the theoretical knowledge that is needed to perform the work. The professional core means the key knowledge, talents and attitudes at the practical work and the minimum core constitutes the necessary basic competence of the profession. The professional core competencies form the most important field of know-how and make the pastors' work peculiar. (Kirkon keskushallitus, 2012.) Suhonen (2009, p. 36) discusses that the pastor needs to have got

an all-round general knowledge from the different fields of theology, the ability to dialogue with other sciences and the readiness to utilize the knowledge of other sciences closely related to the theology. They need to know the Bible and the traditions of the church. The pastor's job is, then, to interpret the Christian message for the people in the different situations. (Kirkon keskushallitus, 2010, p. 2.) From the knowledge work point of view this indicates the professional knowledge gained through the education and vocational training.

The pastors are often faced with complicated and hard themes in their work. They need to be responsible for the impacts of their words and declarations. In addition, the pastor's personality is emphasised in his/her work. Thus, the technical expertise alone is not enough but the knowledge of human nature, personal presence, interaction skills and the ability to face people are essential in the pastors' work. (Suhonen, 2009, pp. 35-36; Kirkon keskushallitus, 2010, p. 2.)

Niemelä (2010, p. 1) says that, in practice the weekly working time is basically distributed for the personal preparation, working with the parishioners, cooperation with the work community and for the administrative tasks. On the other hand, unlike the other professions the clergy is presumed to be in their position outside their work and their role as pastors is assumed to be primary in their lives (Hoge, 2006, p. 383).

Now, having studied the characteristics of the pastors' work, it can be examined more carefully from the profession point of view. The pastor fulfils evidently the definition of profession and therefore it is commonly used as an example when considering the professions. According to the Helander's (1993, p. 40) definition for the profession, the pastor should have a theoretic knowledge base which he/she has got through the several years of education and experience. In Finland, the pastor is typically the master of theology by training. He/she needs to prove the commitment and competency in order to get ordained. This indicates the Helander's qualification test that is required to perform the profession. Moreover, the ethical code and set of norms guide the pastor's work. As mentioned before, the pastors have got the certain boundaries and the framework for their work but on the other hand, they get the autonomy to perform the work. The clergy has an authority in their own domain and their skills are not accessible to the general public (Hoge, 2006, p. 383). This gives them a special professional status and influence.

#### **2.2.6. Conductors – the profession of studying and interpreting the composers' intentions**

The role of the conductor has evolved over the centuries so that the current role of conductors originates back to the late eighteenth century (Levine, 2001, p. 16; Price and Byo, 2002, p. 335). Before that the composers were typically the conductors of orchestras. In addition, most of the conductors were also playing some instrument while



leading the orchestra. As the orchestras got larger and less homogenous, and the compositions became more complex and extensive, the role of coordinator became separated from the instrumentalists. (Levine, 2001, p. 16.) Nowadays, there can, however, be separated four different conductor types. According to Sirén (2010, pp. 11-13), these types are orchestra creator, whose life work is to develop and rehearse the certain orchestra. The composer-conductor - such as Sibelius was - focuses on conducting his/her own compositions. Opera conductor rehearses opera singers, choirs and the orchestra, and leads the operas. Finally, the wandering virtuoso does not stay with one orchestra for a long time but continues quickly to conquer new orchestras and places. (Sirén, 2010, pp. 11-13.)

Conductors educate themselves for their work at the universities (Sirén, 2010, pp. 11-13). Wittry (2006, pp. 11-12) explains that the formal education includes for example harmony, composition and ear training, music history and repertoire and learning the conducting technique. In addition to the physical technique, the conductor education emphasise the score study prior to the rehearsal (Ulrich, 2009, p. 48). This is essential since the conductor's preparation and the score study may start even months before the rehearsal period. The idea in the score study is to understand the form, key, instrumentation, performing edition, historical context and other compositional aspects of the work (Ulrich, 2009, p. 48). The aim is therefore to internalise the composer's fundamental intent of the composition.

On the whole - as in the other professions - the conductor's work is also based on the application of the theoretic knowledge base which is acquired through the several years of education and vocational training. Some professions may be guided by the ethical norms but as for the conductors, the profession is guided by the history of music and the centuries-old tradition of the orchestration.

Conductor is often considered as an ideal type of the charismatic leader. Leadership requires competence, credibility and charisma. (Atik, 1994, p. 23.) According to Silvey (2011, pp. 162-163), one of the most important roles of the conductor is to prepare the orchestra to perform accurately and expressively. The novice conductors spend most of their rehearsal time on the technical issues whereas the expert conductors focus on the larger entities and address the expressivity (Silvey 2011, pp. 162-163). Price and Byo (2002, p. 336) explain that the conductors competence is perceived by the orchestra members' even before the first downbeat given. Therefore, the conductor is under a constant evaluation by the members of the orchestra. On the other hand, the conductor is also assessed by the audience. Levine (2001, p. 18) describes that the conductor is the orchestra's chief performer, he/she stands above the orchestra and leads the group of musicians with the baton. The orchestra becomes the instrument upon which the conductor plays and acts as a window between the orchestra and the audience (Levine,

2001, p. 18). Hence, the audience may form an opinion about the orchestra through the conductor or vice versa.

Rehearsing the orchestra for the performance is the essential part of the conductor's job description. When rehearsing the orchestra, the conductor must maintain the accurate rehearsal model which takes into account different learning styles. The conductor needs to provide visual, aural and kinaesthetic experiences for the musicians (Price and Byo, 2002, p. 346). Moreover, Price and Byo (2002, p. 346) and Ulrich (2009, p. 51) explain that the conductor must have substantial verbal and nonverbal skills to provide the information to the orchestra. Ulrich (2009, p. 49) discusses that the process of conducting can be described simply in four steps. The first step is composer-to-conductor which indicates the score study and understanding the composer's intentions. At this point, the conductor also makes the interpretive decisions that he/she wants to the orchestra to execute. The second step is conductor-to-orchestra which means communicating the musical ideas to the orchestra. (Ulrich, 2009, p. 49.) These two steps give the conductor the artistic authority and make the content of the conductor's work independent which is typical for the professionals. Ulrich (2009, p. 49) continues that orchestra-to-conductor form the third step. It refers to learning how to critically listen and to assess constantly the quality of the sound, from the first rehearsal to the last note of the concert. The final step is the orchestra-to-audience step which means melding and shaping the orchestra sound to match the composer's intentions. (Ulrich, 2009, p. 49.)

Conductors are seldom in the one work place for a long time of period since the nature of the vocation is that the conductor makes often guests appearances both in the home country and overseas (Atik, 1994, p. 23). Therefore, the conductor has to build the relationship with the new orchestra relatively often (Atik, 1994, p. 24). Conductors typically consult their colleagues who have already done the guest appearance the certain orchestra, to obtain the information about the orchestra. They may share information about the level of the orchestra to interpret music and discuss about the technical level of the certain instrument sections and musicians in the orchestra. Hence, the conductors form the professional network in which they share experiences and discuss about the musical matters.

### **2.2.7. Summary of the five chosen professions**

The previous sections analysed the five chosen professions separately and explained the characteristics of each profession. This part will sum up the discussion of the professions and indicate the aspects from which the professions have previously been studied. This section will also explain which aspects and characteristics found in literature are similar to each profession and how the professions differ from each other. Moreover, it is illustrated how the professions fulfil the characteristics of knowledge work.

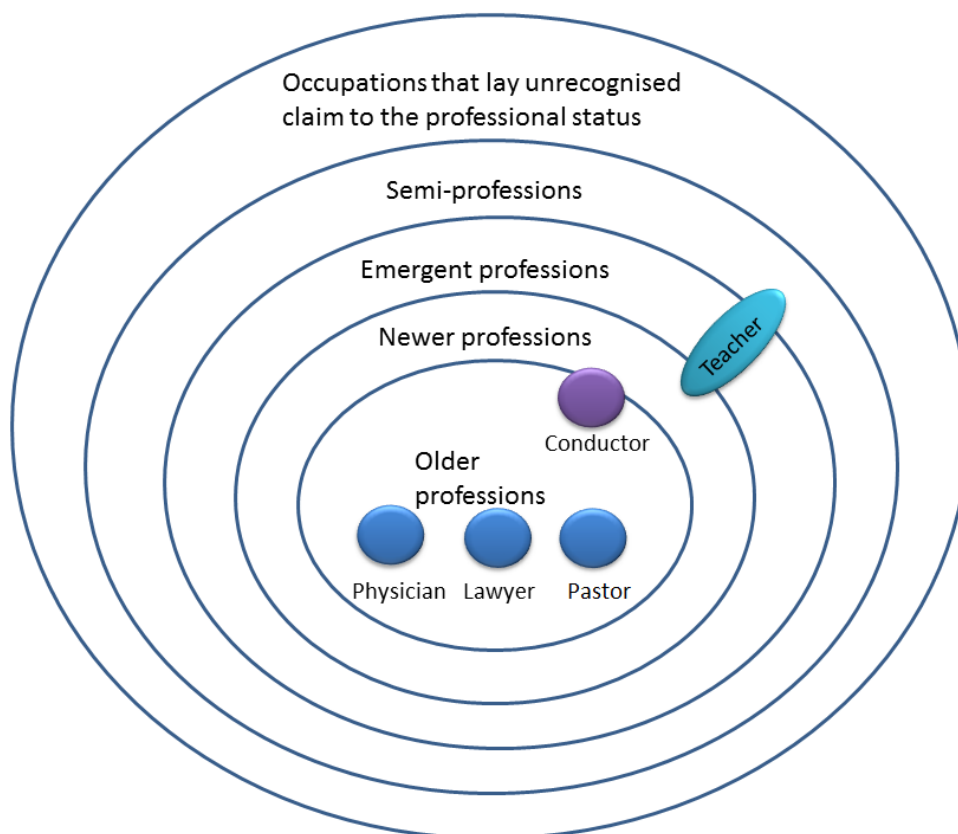
Teaching is a widely studied theme. It has, for example, been examined also from the profession's point of view (see e.g. Luukkainen, 2004). In Finland, the teachers' role and the characteristics have been investigated considerably (see e.g. Kari, 1996; Tahvanainen, 2001) and hence these studies have been utilised also in this thesis. Physicians' work has also been studied from various perspectives. For example Uhlenberg and Cooney (1990) have examined women physicians whereas Bovier and Perneger (2003) discuss the physicians' satisfaction to work. It is also studied from the knowledge work perspective (see e.g. Drucker 1999). In addition, the physicians' work conditions and the negative issues such as stress and burnout have been examined widely (see e.g. McManus, I.C., Keeling, A. & Paice, E. 2004).

Lawyers, in turn, have been studied somewhat broadly from different angles. The common subject among the research community has been the occupational stress and burnout of the lawyers (see e.g. Tsai et al., 2009). Moreover, Daicoff (1997), for example, has studied the lawyers from the profession's point of view. She analyse the aspects such as the lawyer's attributes, education and the characteristics of successful and effective lawyers. In this study, the pastor's work is studied from the Finnish perspective and particularly from the evangelical Lutheran church of Finland. Therefore, the literature used in this thesis considered pastor's work conditions and characteristics generally or then in the Finnish context. Actually, in Finland the pastor's work has been studied extensively in recent years from different perspectives. Specifically, the wellbeing at pastor's work has been of interest among the research community (see e.g. Niemelä, 2010).

As for the conductors, their job description and the content of the work have not been studied academically that much. However, the conductors are considered as a hallmark of the charismatic and creative leaders and therefore the leadership of the orchestra has been studied to some extent (see e.g. Atik 1994; Hunt et al., 2004). Moreover, providing gestures and information for the orchestra has been examined widely (see e.g. Ulrich 2009; Levine, 2001; Silvey 2011). These studies have typically been related to themes such as learning methods and communication. Relatively often, the studies considering music, orchestras and conducting are done by interviewing the musicians, not the conductors (see e.g. Atik 1994; Silvey 2011).

In this study the analysis of the professions started by defining the profession and understanding the historical development of the professions. The Helander's and Erämaja's definitions formed the key profession definition of this study. The history of the professions was also discussed in this chapter. Some of the professions were considered as older professions while for example the teachers' status as a profession has been criticised and they have been perceived as a semi-profession. Figure 5 illustrates how the chosen five professions settle into the different levels of professions. The figure indicates that especially physician, lawyer and pastor are older professions

while the profession of conducting has been formed slightly later. Some studies consider that the teachers form a semi-profession while the others state that the teachers' status as a profession is evident. Therefore, the teachers' profession has been set between the levels of the semi-professions and newer professions.



**Figure 5.** The placement of the chosen professions to the different levels of professions.

Table 3 presents a summary of the professions based on the definition of the profession used in this study. It indicates the characteristics of the professions. The purpose of the table is to illustrate how conductor, lawyer, physician, pastor and teacher fulfil the different features of the definition of the profession. Therefore, the table does not aim to emphasise the differences between the professions but merely the similarities.

**Table 3.** Summary of the professions based on the Helander's (1994, p. 40) and Erämaja (2006, p. 63) definitions.

	Teacher	Physician	Lawyer	Pastor	Conductor
Professions are based on theoretic knowledge	X	X	X	X	X
Knowledge-base is achieved through the several years of education, vocational training and experience	X	X	X	X	X
A qualification test is required in order to perform the profession				X	
The ethical code and set of norms guide the professions	X	X	X	X	(X)
Altruism is typical for the professionals	X	X	X	X	
The work is independent and appreciated	X	X	X	X	X
The segregation of different professions and the social operating systems so that the occupation is professionalised and the certain tasks are defined exclusive to the profession.	X	X	X	X	X





















When the professions are discussed based on their properties, it can be said that they all are fairly old and highly respected professions. Only the teachers' professional status have been criticised to some extent and some sources have considered teaching as a semi-profession. In addition, there are quite few studies about the conductors from the profession's perspective. However, each of these professions gains a strong specialised knowledge-base through the university education and vocational training. In addition, they all continue the training after the graduation to obtain new information and develop the skills. The access to the education and accordingly to the profession is also limited among these professions.

In the literature it was mentioned that the pastor candidates need to get ordained in order to provide the religious ceremonies. However, other professions also need the qualification and possibly the specialisation to work in the particular job. Ethics and standards direct particularly the physicians', pastors', lawyers' and teachers' work. The ethicality of the work makes altruism characteristics for these professions. The orchestra

conducting is not considered as ethical profession like other professions but certain norms relating to music and to the conducting technique directs strongly this profession. All of these professions are working daily with one or more people and their work is closely related to the different phases of the human life. Especially, lawyer, pastor and physician work often privately with people but they may also carry out the tasks among the larger group of people. The teacher and the conductor, in turn, work typically with several people or with the groups. On the other hand, their work contains also working in solitude. Each profession has been given an exclusive right to perform the certain tasks and to make independent decisions in their work. In addition, they have an authoritative position over their customers and other occupational groups. The Helander's definition of the profession considered also the importance of the professional associations but in this summary it was not taken into account. This is due to the fact that the impacts of the professional associations for the chosen professions were not discussed considerably in the literature. However, this aspect will be analysed more carefully in the empirical part of the study. As a whole, the chosen professions fulfil relatively well the different aspects that define the profession.

In addition, it is reasonable to discuss the chosen professions and knowledge work together. It is evident that the professions' work includes knowledge work actions but it is not straightforward how they are weighted in different professions based on the literature. Table 4 shows different knowledge work actions that were discussed in the chapter 2.1 (see page 14) and illustrates how the chosen professions fulfil these actions based on the literature. The bigger and darker and sphere is, the more it was emphasised in the literature and hence, the more important action it is for the profession. Some of the choices are slightly interpretative since the actions were discussed indirectly in the literature. The professions may actually fulfill various knowledge work actions but the following summary is based on the literature review of the chosen professions and the main knowledge work actions selected for this study. Later on, in chapter five, it will be discussed what are the knowledge work actions that came up from the interviews and how they relate to the literature review.

**Table 4.** Different professions from knowledge work perspective

	Teacher	Physician	Lawyer	Pastor	Conductor
Learning					
Knowledge acquisition and sharing					
Analysis and application					
Collaboration and communication					

As for the teachers, it was discussed that they take responsibility over the continuous learning and improvement of their own knowledge and skills in addition to the students' skills. Hence, learning was marked as a darker and bigger sphere in the table. In addition, it was emphasised that the teachers must reflect and analyse their work constantly since it may help the teachers to make better choices at work and to be able to quicker adapt to the changing situations. In the literature, it was explained that even though the teachers are in daily contact with students and their parents, colleagues and the other school staff, they work mainly in solitude. Therefore, their work is on one hand collaboration and communication with others but on the other hand it is largely autonomous work.

The physician's work, in turn, has been studied from the knowledge work perspective and therefore, it is relatively straightforward to indicate that the profession fulfils well the knowledge work actions listed in the Table 4. For example, the characteristics presented by Calman (1994) (see page 26) included continuing professional development which is realised in terms of learning as well as knowledge acquisition and sharing. Actually, the physicians need be committed to lifelong learning and improvement of their knowledge and skills. Furthermore, Calman (1994) emphasised the physicians' ability to work in team and the ability to communicate which is why the collaboration and communication is marked with dark, big sphere. Analysis and application was discussed indirectly in literature in terms of the ethicality of the medical practise. Indeed, the medical practice is closely related to the ethical course of action and the ethical dilemmas arise constantly in physicians' daily work. This requires that

they analyse their own actions and decisions constantly, and apply their knowledge ethically appropriate manner.

It was mentioned that the lawyers must remain current with developments and rapid changes in law and regulations. This requires continuous learning and post-graduate training. In addition, it was emphasised that the lawyer's work is about adapting and interpreting the legal philosophy and theory to the requirements of the case in question. The work is typically confidential and there must be collaborative atmosphere between the client and the lawyer.

From knowledge work point of view, the collaboration and communication were emphasised the most in the pastor's work. Furthermore, the analysis and application were discussed in the literature saying that the pastor needs to have got an all-round general knowledge from the different fields of theology, the ability to dialogue with other sciences and the readiness to utilize the knowledge of other sciences closely related to the theology. Conductor's core task is to study and internalise the scores and communicate it non-verbally to the orchestra. He/she needs to understand the composer's intentions and create the own interpretations about the composition. Therefore, learning, analysis and application as well as collaboration and communication were presented with dark and big sphere. Knowledge acquisition means gathering information about the composer and the music history. This is also important for the conductors.

Table 4 presented the emphases based on the literature. It is, however, evident that in practise the emphases may change depending on the characteristics of the work. For example, in the physician's work the analysis and application of knowledge may be an essential part of their job content. Within the certain profession, the content of work can be relatively different and this was not highlighted in the literature review since the chosen professions were discussed generally. In the next chapter it is examined what are the different aspects enabling and challenging these knowledge work actions and how the knowledge work actions are affected. After that in the empirical part of the study, these knowledge work actions will be discussed more carefully and analysed whether these are realised in practise, thus, in the knowledge work of the chosen five professions. Additionally, it is indicated how these knowledge work actions are enabled or challenged by different aspects.



### **3. KNOWLEDGE WORK ENABLERS**

Knowledge work enablers can be described as the tangible or intangible elements that help the knowledge workers to perform their work better. These elements contribute to knowledge work directly or indirectly. Knowledge work enablers are not only related to employees' productivity and effectiveness but they rather support employees' work, and make it more comfortable and smoother.

According to Ho (2009, pp. 101-102), the key factors that enable knowledge management are strategy and leadership, organisational culture, organisational incentive system and information technology. These elements are also suitable for knowledge work since they, according to Ho (2009, p. 101), support best the employees' knowledge actions in the organisations. Indeed, they stimulate the knowledge workers to develop knowledge and encourage them to share their knowledge and experiences (Ho, 2009, p. 101). This chapter studies the factors that enable knowledge work either directly or indirectly. It will discuss, for example, the elements presented by Ho (2009) but additionally other aspects such as physical work environment.

#### **3.1. The physical work environment**

Peterson and Beard (2004, p. 164) state that the physical workspace refers to an area within the organisation that is arranged to achieve a particular goal. Workspace should be organised considering two variables: autonomy and interaction (Duffy and Tanis, 1993, p. 431). Autonomy indicates the extent of control and responsibility that the employee has over the method, location, and content of the work. Work autonomy can be distinguished into visual and auditory privacy. Visual privacy means the ability to work without a feeling of being watched or that the work is not disturbed by sudden movements. Auditory privacy refers to a possibility to prevent the noise that distracts employee's concentration on work. (Peterson and Beard, 2004, p. 164.)

For knowledge workers the privacy is crucial to perform the tasks. Physical aspects such as own workstation and quiet work spaces enable private knowledge work. For instance, learning and analysis may require private work spaces. In addition, planning and thinking are knowledge work actions that demand concentration. Appropriate private work spaces also help to maintain the cognitive flow and concentration (Heerwagen et al., 2004, p. 525).

On the other hand, the tasks related to collaboration and communication, and knowledge acquisition and sharing may call for interactive work spaces. Interaction indicates the amount of interpersonal communication that is done to achieve the organisational goals (Peterson and Beard, 2004, p. 164). Physical elements such as the office layout, formal and informal meeting places improve the collaboration and interaction with colleagues. Collaborative workspaces support conversation, information sharing so that the possible intangible knowledge becomes explicit. Heerwagen et al. (2004, p. 511) explain that collaborative workspaces improve also group decision-making, increase the ability to get help when needed and contribute to the process integration across work units. Moreover, they offer the increased awareness of who knows what which in turn enhances the acquisition of knowledge (Heerwagen et al., 2004, p. 518).

The physical work environment includes both formal and informal workspaces. These workspaces may be separated to autonomous and interactive workspaces as described earlier. Employees may often need to meet spontaneously for discussion or problem solving. The informal workspaces offer the ability for the groups to meet rapidly and spontaneously (Heerwagen et al., 2004, p. 523). This enhances the communication and interaction and help to solve the problems quickly. The informal workspaces help also to disseminate tacit knowledge and improve the spirit of the work atmosphere.

On the other hand, knowledge workers often perform outside the office environment. They may, for example, travel or work at customer sites or at home. Knowledge work consists of knowledge sharing time, thinking or quiet time, research or writing time and operational time (Bentley and Yoong, 2000, p. 351). The knowledge sharing time and the operational time may involve interaction with others so that the knowledge worker may communicate with the customer or colleague while they are geographically distant. Bentley and Yoong (2000, p. 352) explain that particularly the home environment suits well to the work which includes preparing, writing and planning work and requires quiet and uninterrupted research or writing time. The mobility provides efficient space utilisation and ability to work in the environments that suit best to different kind of tasks (Heerwagen et al., 2004, p. 523). Pyöriä (2003, p. 178) agrees with Heerwagen et al. and explain that distributed work arrangements offer more flexible working hours for the knowledge worker. Furthermore, the employees are given more autonomy and responsibility for performing their duties. It provides stronger employee job satisfaction, motivation and positive occupational identity (Pyöriä, 2003, p. 178).

### **3.2. Organisational culture and social aspects enabling knowledge work**

Organisational culture is a complex whole of values, beliefs, behaviour models and symbols (Ho, 2009, p. 102). From knowledge work perspective, the organisational culture defines the value of knowledge and explains to large extent the existence of

innovation in the organisation. The co-operative atmosphere contributes to the knowledge work actions such as collaboration, communication and knowledge creation. The organisational culture is positively related to the willingness to share knowledge. (De Long, 1997; Sveiby and Simons, 2002, p. 4.) Trust, identity and efficacy are part of the organisational culture and they also constitute the core elements for team collaboration (Sveiby and Simons, 2002, p. 4). In the next section, some elements affecting the organisational culture are discussed more carefully. In addition, it will be explained how these factors enable knowledge work.

Positive organisational culture improves knowledge work actions in many ways. First of all, open organisational culture, according to Sveiby and Simons (2002, p. 7), contributes to sharing knowledge and the creating of new knowledge in the department so that it is encouraged not only in words but in practice. The organisational culture generates a collaborative climate in which an open communication is the characteristics of the organisation as a whole. (Sveiby and Simons, 2002, p. 7.) This form the part of the organisation's knowledge infrastructure capability which affects the organisation's ability to innovate and to respond quickly to change. As whole, the positive organisational culture values knowledge sharing, openness and trust. (Alavi et al., 2006, p. 196.)

A positive organisational culture does not only enable individual knowledge work but also team work. Sveiby and Simons (2002, p. 7) discuss that the positive organisational culture support team work so that the knowledge workers are more willing to share work experiences informally and formally within the team and help each other to learn new skills. Moreover, in this kind of organisation the employees understand that there is much they could learn from their colleagues and on the other hand, they do not hide their own skills and knowledge if it could benefit the team's performance. (Sveiby and Simons, 2002, p. 7.)

In addition, the employees own attitude to work affect the organisational culture considerably. If there is a collaborative climate in the organisation, the knowledge workers know that the information sharing deepens their own and the entire department's knowledge. Furthermore, the employees understand that their expertise will develop as a result of co-operation with others. Combining the knowledge with the colleagues it is possible to generate new ideas and solutions. (Sveiby and Simons, 2002, p. 7.)

On the other hand, not only the employee's attitude affects the positive organisational culture but also the management culture has a significant impact on it. Sveiby and Simons (2002, p. 7) describe that if the management culture is favourable, the supervisors encourage knowledge workers to come up with new ideas and innovate new solutions. The managers may also encourage open communication and knowledge

sharing with one another, and assure that everyone is kept informed. (Sveiby and Simons, 2002, p. 7.)

### **3.3. Motivation and job involvement improving knowledge work**

Enhanced motivation, performance, loyalty and commitment are the key issues to contribute to work performance and thus, to the performance of the entire organisation and to its growth (Sharabi and Harpaz, 2010, p. 389). There are various factors that influence these issues. Diefendorff et al. (2002, pp. 94-95) discusses that for example job involvement is one attribute that is positively related to these advantages. Job involve can be present if the person is motivated to his/her work.

Motivation is evidently one issue that has an influence on knowledge work. Ryan and Deci (2000, p. 54) say that a person who feels energetic and active toward the tasks are considered motivated. People have different amounts as well as different kinds of motivation. In other words, motivation may differ in terms of the level and orientation (Ryan and Deci, 2000, p. 54).

Rossi (2004, p. 2) discusses that individual motivations can be classified to two broad groups: intrinsic and extrinsic motivation. Intrinsic motivation indicates doing something for its inherent satisfaction and not because of some separable reason. If the person is intrinsically motivated, he or she perform the tasks for fun or challenge rather than external rewards and pressures (Ryan and Deci, 2000, p. 54.) Rossi (2004, p. 2) explains that extrinsic motivation relates to the immediate or delayed benefits and rewards which the person usually obtains in the form of monetary compensation. Despres and Hiltrop (1995, p. 20) and Ho (2009, p. 102) state that organisations should have an incentive and compensation program that contribute to individual performance comprehensively. It should not emphasise the extrinsic sources of motivation such as cash and other monetary incentives but rather encourage the intrinsic motivation factors. (Despres and Hiltrop, 1995, p. 20.) The following list illustrates the hierarchy of some of the most important motivation factors presented in Despres and Hiltrop (1995, p. 20)

- 1) Autonomy
- 2) Independence
- 3) Personal/professional growth
- 4) Recognition
- 5) Appreciation
- 6) Acknowledgement
- 7) Cash and cash-equivalents

These factors have relatively close connection to the characteristics of knowledge work and knowledge workers. For example, knowledge workers typically have a high need for autonomy and self-management at work. Despres and Hiltrop (1995, p. 19) state that autonomy, independence and personal growth are possible fulfil when job structures and leadership practices enable empowerment and self-direction.

Job involvement can be a result of a person's motivation. According to Paullay et al. (1994, p. 225), job involvement can be defined as 'the degree to which one is cognitively preoccupied with, engaged in, and concerned with one's present job'. Diefendorff et al. (2002, pp. 94-95) explain that the employees who have a high job involvement, have higher job performance, they are more immersed in their job and more committed to their organisation. These employees are also more motivated to work which in turn has a significant impact on job performance. Job involvement has also a positive effect on the issues such as turnover and absenteeism. (Diefendorff et al., 2002, pp. 94-95.)

Job involvement enables knowledge work indirectly. It has a strong relationship with the organisational citizenship behaviour (OCB) which in turn consists of five dimensions: consciousness, sportsmanship, courtesy, altruism and civic virtue. Consciousness indicates the extent to which the employee is punctual, high in attendance and goes beyond normal requirements and expectations (Diefendorff et al., 2002, p. 96). When examining the knowledge work actions presented in Table 2 (see page 14), an employee who has a high job involvement and consciousness toward his or her job uses the work time wisely and focuses carefully on problems, issues and customers. Job involvement and consciousness improve particularly finding and organising ideas, acquiring information and creating new knowledge. Moreover, the employee may have better readiness for performing the tasks that require thinking and learning.

Sportsmanship indicates the extent to which the employee complain unnecessarily or make small issues bigger (Diefendorff et al., 2002, p. 96). Sportsmanship does not enable knowledge work as such but it rather enables the organisational culture in which the employees may share ideas and innovate more freely. Together with job involvement, this feature allows the employees to connect and approach each other more easily and develop the work environment and climate more co-operative when the employees do not complain unnecessarily.

Courtesy refers to the behaviours that prevent problems from occurring for others by giving advance notice and sharing information. Courtesy is closely related to altruism which in turn indicates how employees help others with their job-related problems (Diefendorff et al., 2002, p. 96). According to this, the employees who have a high job involvement are more committed to help a specific person in face-to-face situations,

such as helping others who have heavy workloads and orienting new employees even though it is not required (LePine et al., 2002, p. 53). This enables both the helper's knowledge work and the other person's work since this increases communication and interaction. Moreover, having these characteristics employees share information and possibly create new knowledge. This also increases trust and collaborative climate in the organisation which evidently have an impact on knowledge work as enabling it significantly.

Civic virtue is about contributing to political issues in organisations (Diefendorff et al., 2002, p. 96). Job involvement and the civic virtue together improve the organisational climate in which knowledge work is performed. These features also ensure that the work environment is developed more favourable for knowledge workers. Contributing to the political issues in the organisation, the physical work environment and organisational culture may be improved. These aspects in turn enable knowledge workers to carry out their tasks more efficiently.

### **3.4. Information technology essentiality for knowledge workers**

Drucker (1995, p. 2) states that one of the most important challenge facing managers is to raise the productivity of knowledge and service workers. As a consequence, information technologies (IT) have increased significantly in the organisations to support and to enhance knowledge work (Ware and Degoey, 1998, p. 20). Ware and Degoey (1998, p. 20) explain that the term "information technology" refers to the computer-based products and services, such as computers, computer networks, operating systems, databases and software. There are various IT tools that help to acquire, store, interpret and disseminate information (Ware and Degoey, 1998, pp. 22-24). Ware and Degoey (1998, p. 36) present a categorisation for different information processing tools which the knowledge workers may use in different knowledge work actions. The knowledge work actions used here are knowledge acquisition, storing, interpretation and dissemination. Table 5 illustrates this categorisation. In addition to the IT tools, the following list includes also other tools that help to process information to some extent (such as telephone).

**Table 5.** Information processing tools (adapted from Ware and Degoey, 1998, p. 36).

Acquire	Store	Interpret	Disseminate
<ul style="list-style-type: none"> <li>• databases and servers</li> <li>• search engines</li> <li>• electronic catalogues</li> <li>• telephone and email</li> <li>• spread sheets and word processors</li> <li>• job-specific applications</li> <li>• company-specific systems</li> </ul>	<ul style="list-style-type: none"> <li>• databases and servers</li> <li>• word processors</li> <li>• filing and indexing tools</li> <li>• workflow tools</li> <li>• job-specific applications</li> <li>• company-specific systems</li> </ul>	<ul style="list-style-type: none"> <li>• databases</li> <li>• search engines</li> <li>• statistical software</li> <li>• designing tools</li> <li>• spread sheets and word processors</li> <li>• job-specific applications</li> <li>• company-specific systems</li> </ul>	<ul style="list-style-type: none"> <li>• spread sheets and word processors</li> <li>• presentation tools</li> <li>• workflow tools</li> <li>• telephone and email</li> <li>• job-specific applications</li> <li>• company-specific systems</li> </ul>

There are various tools and techniques available to gather, store and disseminate information (Ware and Degoey, 1998, pp. 22-23). Knowledge workers may for example acquire information quickly using search engines, databases, servers and electronic catalogues. Information may be stored to databases, servers, filing and indexing tools and workflow tools. Moreover, information may be codified with word processors and spread sheets for later usage. This codified information may be shared for example through emails, presentations and workflow tools. Many of the tools and techniques that are commonly used to find and store information are rather generic (for example Internet search engines) but there are also many job- or company-specific systems, such as product design systems, through which the knowledge workers may acquire, store and disseminate information (Ware and Degoey, 1998, p. 22).

As Ware and Degoey (1998, p. 23) discusses, there are also IT tools that help to interpret knowledge. This is the step where new knowledge may be created and applied. The information technology tools that are used in these activities range from simple word processors that support writing, to more sophisticated statistical and analytical systems. These complex tools that support information processing and interpretation are much more company- and job-specific than the tools that enhance other information tasks. (Ware and Degoey, 1998, p. 23.)

The categorisation, presented by Ware and Degoey (1998, p. 36), includes tools that help to transmit information but also tools that provide the display formats which make

the information meaningful for the knowledge workers. According to Scarbrough (1999, p. 8), using information technology, the tacit knowledge may be codified to explicit knowledge and shared easily for those who need that knowledge. Fischer and Otswald (2001, p. 62) discuss that transferring constantly the tacit knowledge to an explicit form using different IT tools, the entire system from vague and tacit conceptualisation begin to develop. It provides an opportunity to generate a common language and enables better interaction, reaction and negotiation around the externalised information (Fischer and Otswald, 2001, p. 62).

This codified knowledge may be edited and combined with other knowledge so that it may generate new knowledge. In addition, IT encourages the emergence of looser and more spatially distributed organisational structures which favour networking and mobile work arrangements. (Scarbrough, 1999, p. 8.)

Information technology and particularly mobile information systems enable the access to the organisation's information and communication resources. Davis (2002, p. 69) states that the mobile information systems and devices would enable knowledge work in different ways. These beneficial effects are removal of time and space constraints to communication, removal of time space constraints for doing cognitive knowledge work and improved access to decision makers (Davis, 2002, p. 69).

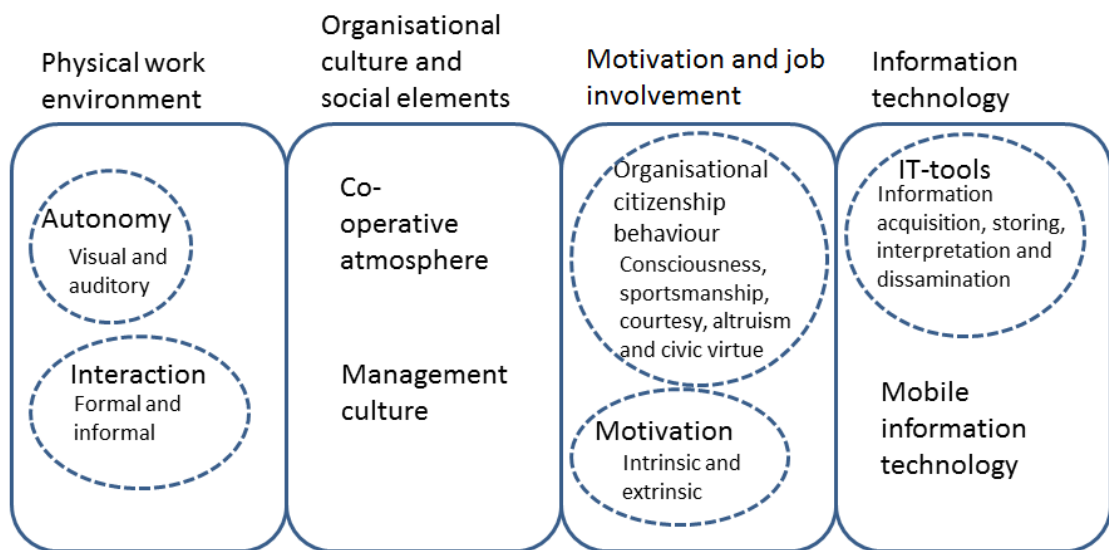
Mobile information systems and devices provide the anytime and anyplace communication access to the colleagues and the decision makers. This is important since the major proportion of knowledge work is about communicating, interacting and collaborating with others. Davis (2002, p. 69) discusses that with mobile computing systems the knowledge workers are not tied to a certain employment location and time to perform the communication and collaboration activities. Indeed, they may be out of the office environment, still being in touch with colleagues and decision makers, and interact with them in various different ways. It also helps to exchange explicit information in forms of documents, messages and analyses. (Davis, 2002, p. 69.) This is particularly useful for the knowledge workers who need to cooperate with persons in other locations and time zones.

Using mobile information and computing systems the knowledge workers are not tied to one physical work environment. According to Davis (2002, p. 69), this has a significant impact on the productivity of knowledge workers if the office functions move with the knowledge workers. This also releases knowledge workers from performing tasks within the normal office hours. They may take an advantage of the times when they actually feel productive. (Davis, 2002, p. 69.)



### 3.5. Summary of the key elements enabling knowledge work

This chapter focused on four different aspects enabling the knowledge work: physical work environment, organisational culture and social aspects, job involvement and motivation, and finally the information technology. Figure 6 illustrates the key knowledge work enablers investigated in this study. In addition, it shows the different concepts and emphases related to the key knowledge work enablers.



**Figure 6.** Key knowledge work enablers and the different emphasis of them.

The first element was physical work environment. Peterson and Beard (2004, p. 164) discuss that the workspace needs be organised concerning two variables, autonomy and interaction. The autonomy and privacy are crucial for the knowledge workers to perform their tasks. For example, learning and analysis may require private work spaces. In addition, planning and thinking are knowledge work actions that need concentration. Appropriate private work spaces also help the knowledge workers to maintain the cognitive flow and concentration (Heerwagen et al., 2004, p. 525).

On the other hand, the knowledge workers may typically have tasks related to collaboration and communication, and knowledge acquisition and sharing. These tasks may call for interactive work spaces. Collaborative workspaces enable the intangible knowledge to become explicit knowledge through conversation and information sharing. Heerwagen et al. (2004, p. 511) explain that collaborative workspaces improve also group decision-making, increase the ability to get help when needed and contribute to the process integration across different work units. Moreover, the interactive workspaces offer the increased awareness of who knows what which in turn enhances the acquisition of knowledge (Heerwagen et al., 2004, p. 518).

The physical work environment includes also the formal and informal workspaces. Employees may often need to meet spontaneously for discussion or problem solving. The informal workspaces entail the possibility for the groups to meet spontaneously without booking the formal meeting time (Heerwagen et al., 2004, p. 523). This enhances the communication and interaction and help to solve the problems quicker. The informal workspaces help also to disseminate tacit knowledge and improve the spirit of the work atmosphere.

The second aspect that was discussed as an enabler of knowledge work is related to organisational culture. From knowledge work perspective it can be stated, the organisational culture defines the value of knowledge and explains to large extent the existence of innovation in the organisation (De Long, 1997; Sveiby and Simons, 2002, p. 4). The co-operative atmosphere contributes to the knowledge work actions such as collaboration, communication and knowledge creation. The organisational culture is also related to the willingness to share knowledge (Alavi et al., 2006, p. 196). With a positive organisational culture it able to generate a collaborative climate in which an open communication is the characteristics of the organisation as a whole.

It was also explained that the positive organisational culture enables also team work. Sveiby and Simons (2002, p. 7) discuss that the positive organisational culture support team work so that the knowledge workers are more willing to share work experiences informally and formally within the team and help each other to learn new skills. In addition, the knowledge workers own attitude to work affect the organisational culture considerably. Within the favourable organisational culture, the knowledge workers know that the information sharing deepens their own and the entire department's knowledge. Moreover, the employees understand that their expertise will develop further as a result of co-operation with the colleagues. Combining the existing knowledge with the colleagues it is able generate new ideas and solutions.

The management affects considerably the organisational climate. If the management culture is favourable, the supervisors encourage knowledge workers to come up with new ideas and to innovate new solutions. The supervisors may enable the positive climate by encouraging open communication and knowledge sharing with one another, and assure that all the employees are kept informed. (Sveiby and Simons, 2002, p. 7.)

The third aspect enabling knowledge work that were analysed in this chapter is the job involvement and motivation. Enhanced motivation, performance, loyalty and commitment are the key issues to contribute to work performance. Moreover, these elements have a positive impact on the entire company's actions. Job involvement is one factor that can affect the knowledge workers' work performance. It was explained earlier that the knowledge workers, who have a high job involvement, have higher job

performance, they are more immersed in their job and more committed to their organisation. Furthermore, these employees are typically more motivated to their work.

Job involvement was said to have a strong relationship with the organisational citizenship behaviour (OCB) which consists of five dimensions: consciousness, sportsmanship, courtesy, altruism and civic virtue. A knowledge worker who has a high job involvement and consciousness toward his or her job uses the work time wisely and focuses carefully on problems, issues and customers. Job involvement and consciousness improve particularly finding and organising ideas, acquiring information and creating new knowledge. Moreover, the employee may have better readiness for performing the tasks that require thinking and learning. The sportsmanship feature, in turn, allows the knowledge workers to connect and approach the others more easily. Furthermore, it helps to develop the work environment and climate more co-operative when the employees do not complain unnecessarily.

The knowledge workers who have a high job involvement and own the characteristics of courtesy and altruism are more committed to help the other persons in face-to-face situations. They may for example help their colleagues with heavy workloads and orient new employees even though it is not required (LePine et al., 2002, p. 53). This enables both the helper's knowledge work and the other person's work since this increases communication, interaction and the tasks become completed. Moreover, having these characteristics the knowledge workers share information and possibly create new knowledge more openly. The civic virtue together with job involvement increase trust and collaborative climate in the organisation which evidently have an impact on knowledge work as enabling it significantly. Civic virtue affects the political issues in the organisation and also ensures that the work environment is improved more favourable for the knowledge workers.

Motivation is an important aspect that enables knowledge work. Rossi (2004, p. 2) discusses that individual motivation can be classified to two broad groups, intrinsic and extrinsic motivation. Despres and Hiltrop (1995, p. 20) and Ho (2009, p. 102) analyse that organisations should create an incentive and compensation programs that contribute to individual performance comprehensively. It is intended primarily to affect the employees' motivation. The incentive program should not emphasise the extrinsic sources of motivation such as cash and other monetary incentives but rather encourage the intrinsic motivation factors. A good example of the incentive program emphasise especially autonomy, independence, personal and professional growth, recognition, appreciation, acknowledgement, cash and cash-equivalents. This stresses the intrinsic motivational elements that are typical characteristics for the knowledge workers.

Information technology is the fourth element that was discussed in chapter as an enabler of knowledge. In recent decades, information technologies (IT) have increased

significantly in the organisations to support and to enhance knowledge work (Ware and Degoey, 1998, p. 20). Hence, there are various IT tools that help the knowledge workers to acquire, store, interpret and disseminate information (Ware and Degoey, 1998, pp. 22-24). Knowledge workers may for example acquire information quickly using search engines, databases, servers and electronic catalogues. Moreover, information may be codified with word processors and spread sheets for later usage. This codified information may be shared for example through emails, presentations and workflow tools for the colleagues. There are also IT-tools that help to interpret knowledge. This is the step where new knowledge may be created and applied. These tools are often company-specific sophisticated tools that enable knowledge work.

With information technology, the tacit knowledge may be codified to explicit knowledge and disseminated easily for those who need that knowledge. Fischer and Otswald (2001, p. 62) discuss that transferring constantly the tacit knowledge to an explicit form using different IT tools, the entire system from vague and tacit conceptualisation begin to develop. This provides an opportunity to generate a common language and enables better interaction, reaction and negotiation around the externalised information.

In addition, IT encourages the emergence of looser and more spatially distributed organisational structures which favour networking and mobile work arrangements. This contributes to the removal of time and space constraints to communication, removal of time space constraints for doing cognitive knowledge work, and improves the access to the decision makers. (Davis, 2002, p. 69.) Davis (2002, p. 69) discusses that with mobile computing systems the knowledge workers are not tied to a certain location and time to perform the communication and collaboration activities. Indeed, the knowledge workers may work outside the office environment, still being in touch with colleagues and decision makers. This also releases knowledge workers from performing tasks within the normal office hours. They may take an advantage of the times when they actually feel productive.

It must be remembered that even though the elements were discussed separately, as the figure 6 illustrates, they are however closely related to each other. For example, if the organisation provides the appropriate workspaces for formal and informal interaction, it evidently has a positive impact on the organisational culture and co-operative atmosphere. In addition, the organisational culture has a strong connection to the employees' motivation. Therefore, the elements studied in this chapter need to be understood comprehensively. This perspective will be taken into account when examining the professions empirically.

## 4. KNOWLEDGE WORK CHALLENGES

Knowledge work barriers make work tasks more difficult or even unfeasible to perform. They may challenge the performance of tasks so that the normal tasks become more awkward to carry out. On the other hand, knowledge work barriers may prevent the execution of the task completely. In addition, these factors may influence the performance of the work indirectly, for example, by reducing the motivation toward achieving the goals. According to Matson and Prusak (2010, p. 93) the knowledge work barriers can be divided into different groups: physical, technical as well as social, cultural and contextual barriers. These aspects are studied more carefully in the next chapters.

### 4.1. Physical work environment

As the content of the work has changed greatly, it has produced pressure to modify the physical work environment in the organisations. Duffy and Tanis (1993, p. 427) say that the most widely used work environment model has been so called office as factory. The employees in this organisational environment had a little autonomy in their work and they had a relatively low need for interaction with others. Employees had their own workplaces where they conducted their tasks individually. (Peterson and Beard, 2004, p. 164.) However, during the last decades of 1900s the teamwork became more popular way of organising work. Peterson and Beard (2004, pp. 164-165) explain that in teamwork, the team members' need for interaction is high and the members are dependent on each other. To achieve goals, the team members need to organise and standardise the tasks and schedule them carefully (Peterson and Beard, 2004, p. 165). Knowledge work, however, involves both individual tasks in own privacy and high interactive team work. Hence, they also need the physical work environment in which they have an access to private work spaces as well as the work spaces that support collaboration.

According to Virtaharju (N.d., p. 7), the physical work environments provided by the organisations do not support knowledge work particularly well. For example, many organisations lack the workspace that supports team work. Therefore, knowledge workers choose their work environment for themselves. The knowledge workers report repeatedly being left at home to carry out demanding and challenging tasks which really need concentration and privacy. Unfortunately, every organisation does not offer this possibility and flexibility for their knowledge workers. (Virtaharju, N.d., p. 7.)

Organisations lack particularly physical work spaces that support team work (Peterson and Beard, 2004, p. 170). In addition, the informal collaboration with the colleagues is important aspect in knowledge work and the appropriate space for informal interaction must be provided by the organisations. The lack of proper physical work environment supporting team work as well as informal interaction may challenge the knowledge work actions such as knowledge sharing, brainstorming, collaboration and communications with colleagues.

Haynes (2008, p. 181) has categorised attributes in the physical work environment that influence the knowledge work to some extent. Haynes divided the factors into four different groups: comfort, office layout, interaction and distraction. This categorisation is presented in the Table 6.

**Table 6.** Physical work environment categories and attributes affecting knowledge work (adapted from Haynes, 2008, p. 181).

Category	Attributes
Comfort	Ventilation, heating, natural lighting, artificial lighting, decor, cleanliness, overall comfort, physical security
Office layout	Informal meeting areas, formal meeting areas, quiet areas, privacy, personal storage, general storage, own work area
Interaction	Social interaction, work interaction, creative physical environment, overall atmosphere, overall office layout and refreshments
Distraction	Interruptions, crowding, noise

Haynes (2008, p. 181) divided the categories also into physical environment and behavioural environment. First two groups, comfort and office layout, represent the physical environment whereas interaction and distraction indicate the behavioural environment (Haynes, 2008, p. 181). Clearly, these categories constitute tangible and intangible entities so that the attributes in physical environment has tangible elements while those in behavioural environment include intangible factors. The first group, comfort, includes natural physical aspects, such as heating, lighting and cleanliness, which are integral part of work environment. As such, they do not actually improve or

prevent knowledge work, but if some of these factors deteriorate fundamentally or are missing, the work may be hindered.

Office layout provides a setting for performing knowledge work. These factors improve knowledge work significantly when they are taken into account in the organisation. A diverse work environment enables working independently as well as in groups, which is also important in knowledge work. However, if the organisation lacks the efficient office layout, the employees may not carry out their tasks effectively. It may challenge the tasks and the knowledge work actions that require concentration, such as planning, thinking, learning and analysis, and on the other hand, poor meeting areas worsen the collaboration and interaction with colleagues. This affects negatively the team work performance which is integral part of knowledge work.

Interaction, distraction and office layout go hand in hand. Interaction refers to the formal or informal work-related reciprocal action. The office layout enables the interaction with one another while it also may have an effect on the distractions. Haynes (2008, p. 192) says that these behavioural components, interaction and distraction, have greater impact on knowledge work than the physical elements. Interaction and distraction have the most positive and the most negative effect on knowledge work (Haynes, 2008, p. 192). Haynes (2008, p. 192) continues that the physical elements do not actually improve knowledge work if the organisation offer the employees flexibility to work away from the office environment. Haynes (2008, p. 192) explains that there clearly exist a tension between interaction and distraction. On one hand, the knowledge workers value interaction but on the other hand they perceive distraction as negative influence on their work. This generates a paradox since one person's interaction may be another person's distraction. (Haynes, 2008, p. 192.) So, even though interaction may enable one person's knowledge work, it may challenge or even hinder another's work execution.

Some organisations may offer the knowledge workers a flexibility to work away from the office environment and sometimes knowledge workers must work, for instance, on customer side or attend the conferences and meetings. This distributed work may be temporary or regular mode of working. In addition, the distance of work places may vary as well as the number of places (Andriessen and Vartiainen, 2006, p. 36). Geographically distant physical work environment forces the employees to coordinate their work with others in certain way. Moreover, it may change the way how the colleagues communicate with each other. For example, differences in time zones may force the employees to work and communicate in a new way. Employees may not reach each other if they work at a different time due to the time difference. Therefore, the knowledge acquisition and knowledge sharing may also suffer from this. Geographical distance may also raise challenges since border of the work and personal life may obscure (Andriessen and Vartiainen, 2006, p. 40).

On the other hand, working outside the office environment, the boundaries between work and non-work disappear. It could even lead to workaholic culture with long working hours and badly designed physical facilities. (Pyöriä, 2003, p. 178.) Furthermore, the distributed work arrangements may require the individuals or the organisation to make heavy investments in information technology since the mobility obligate the knowledge workers to rely on stable technical and social infrastructures to get their daily work done (Churchill and Munro, 2001, p. 4; Pyöriä, 2003, p. 178). Moving on the work also raises the data security risks while employees perform their tasks or carry their papers outside the office environment (Pyöriä, 2003, p. 175).

## **4.2. Social, cultural and contextual elements challenging knowledge work**

Social and cultural barriers imply the rigid organisational hierarchy and/or incentives that do not encourage employees to commit and to improve their performance. (Matson and Prusak, 2010, p. 94.) Matson and Prusak (2010, p. 95) continue that contextual barriers relate to the situation in which employees are unwilling to share and apply the knowledge that is obtained from colleagues. Particularly, the barriers in sharing knowledge are important to identify and discuss since, knowledge sharing is part of key knowledge work actions. Being the key action in knowledge work the knowledge sharing needs to be considered both from the deliverer's and receiver's viewpoint. Riege (2005, p. 19) explains, that in the organisations it is difficult to direct the ownership of the employees' knowledge, which in turn may become outdated without the acquisition of new knowledge. Moreover, the meaningful know-how and skills may quickly disappear if the employee leaves the organisation.

Riege (2005, p. 23) lists different elements that hinder knowledge sharing in the organisations. One element is general lack of time to share knowledge. The employees may also believe that sharing knowledge could reduce or jeopardise his/her job security. This can be related to the lack of trust in people since they can misuse the shared knowledge or take the credit for it. This decreases the willingness to share knowledge. On the other hand, employees may not even realise the value and benefits of knowledge sharing in general. Moreover, the ability to share knowledge depends on the employee's communication and interaction skills (Riege, 2005, p. 24). Verbal and written communication skills are essential to effective knowledge sharing and in this way both tacit knowledge and explicit knowledge may be shared efficiently.

Björklund (2010) has investigated elements that may affect the product development work to some extent and found altogether nine critical categories that may affect the product development project's success or failure. The categories are collaboration, communication, attitude, trust, motivation, autonomy, goals, time and specific skills and knowledge. Björklund states that these factors can be generalised also to the social and



cultural context of knowledge work. (Björklund, 2010, p. 520.) Thus, they may have a positive or the negative impact on knowledge work.

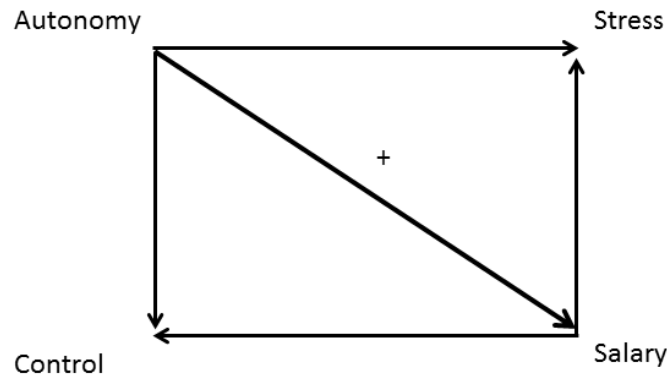
Organisational climate and cognitive-motivational-related elements such as motivation, trust and the willingness to co-operate are the key issues to affect knowledge work in the organisation (Björklund, 2010, p. 522). Collaboration became a significant issue that is often perceived poor among the knowledge workers according to Björklund (2010, p. 520). Therefore, the employees need better collaboration, communication and confidence in the department they work as well as in the other departments. Even though, the collaboration would work fluently, there might be difficulties with sharing work and ideas between the parties (Björklund, 2010, p. 520). The obstacles in collaboration, communication and knowledge sharing are part of knowledge work but they also may have a negative impact on the other knowledge work actions. For example, learning happens partly through socialisation in which the interaction and the sharing of tacit knowledge have an important role. If the organisational climate does not support the collaboration, the comprehensive learning process may be hindered. This may also affect dramatically the knowledge acquisition since knowledge can be gathered by communicating with the colleagues. Moreover, the knowledge analysis which can also be done in teams, for example by brainstorming, may turn out to be challenging and ineffective if the organisational climate is not collaborative enough. Therefore, organisational climate which support collaboration and communication is critical for knowledge work.

According to Björklund (2010, p. 522), one element that may hinder knowledge work is employee's motivation towards his/her tasks. Thomas (2000, p. 22) explains that the knowledge workers typically expect that their work is somewhat meaningful and rewarding. If the employees lack the purpose and satisfaction, they are not motivated to achieve the objectives (Thomas, 2000, p. 22). Then, it is possible that all the knowledge work actions are challenged. Suffering the lack of purpose and motivation to work, both collaborative and individual work may become more unattractive to carry out.

As stated above, knowledge work is a sovereign job which indicates that neither tasks nor workdays are alike. There are no routines and everyone may work wherever and whenever. Furthermore, they are free to use any method that suits best to carry out the task. This range of possibilities may appear frustrating and it may cause stress for some knowledge workers. Furthermore, employees are usually leaved alone to cope with the stress so that individuals have a full responsibility of their job performance and working life. (Ipsen and Jensen, 2012, p. 329.)

Blom et al. (2000, p. 431) state that in the past decades the different benefits were generally accrued to employees in senior positions while unfavourable things accumulated for manual workers. In knowledge work context the situation is not that

straightforward. Figure 7 illustrates the interrelationship between some key elements in knowledge work. The relationship between them may be either positive or negative. For example, autonomy and (high) salary have a positive connection. Stress and control, however, are perceived as negative issues and they have also negative influence on knowledge work.



*Figure 7.* Knowledge work contradiction

The relationships between autonomy and stress, autonomy and control, salary and stress, and salary and control are contradictory. Indeed, Blom et al. (2000, p. 431) say that the price of autonomy and high salary is stress and a tighter control at work. One reason that may affect this is the fact that knowledge work and knowledge workers are attempted to integrate into the rapidly changing efficiency and productivity requirements. (Blom et al., 2000, p. 431.) Pyöriä (2006a, p. 162) agrees with this and continues that especially the new knowledge workers, who evidently are the productive core of the economy, are under constant pressure to perform better and better. This affects the unfavourable competition between the knowledge workers (Pyöriä 2006a, p. 162).

### **4.3. Information technology challenges in knowledge work**

Physical barriers, which include geographic distance and differences in time zones, are typically closely related to technical barriers. This is because the lack of appropriate technical tools becomes even more pronounced when the employees are geographically distant (Matson and Prusak, 2010, p. 94). Therefore, the technical challenges are discussed from the perspective of mobile and non-mobile work.

According to Perotti et al. (2010, p. 213), one issue facilitating to knowledge work is the ubiquitous access to information. As a consequent, the knowledge workers may become more mobile and perform their tasks outside the office. However, it may also cause negative aspects which challenge or even prevents knowledge work. Firstly, ubiquitous

access to information and the demands for attention may enable unnecessary and unproductive interruptions. Due to mobile information systems and computing anytime and anyplace may have changed the organisational culture so that the immediate response is necessity. Therefore, interruptions and responses to them may prevent knowledge workers to concentrate on the important tasks. (Davis, 2002, p. 70.)

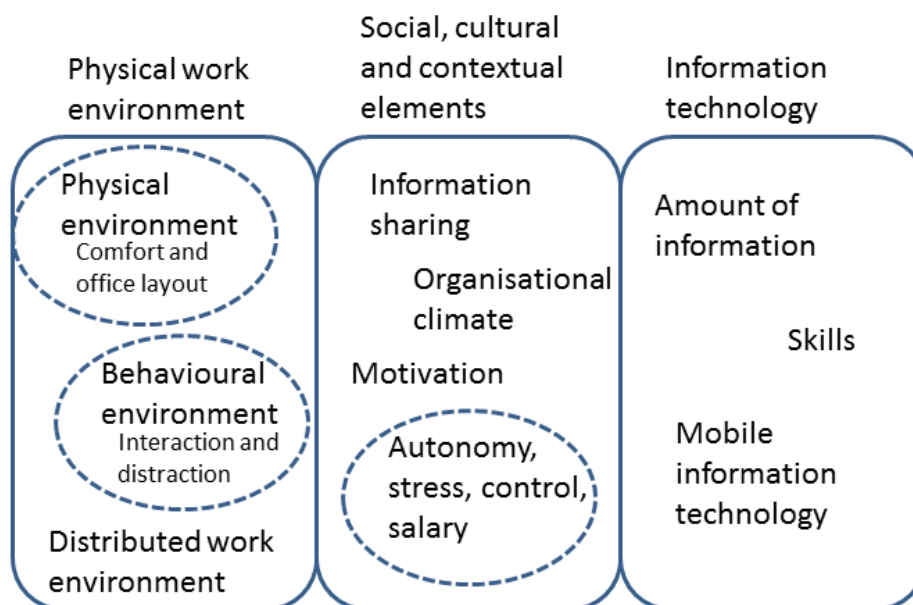
Secondly, using information and communication tools (ICT) for performing knowledge work requires new skills. People, for example, need more help with filtering, prioritizing and integrating information since there are so much data available (Perotti et al., 2010, p. 214). Perotti et al. (2010, p. 215) continue that knowledge workers may now have multiple information devices to manage and therefore, it may be difficult to ensure that they have the access to right and up-to-date information at the right time. Davis (2002, p. 70) agrees with this and says that if there is too much information available, it may affect the scarce attention. Knowledge workers may find it difficult to recognise the important information for them. Fischer and Otswald (2001, p. 63) say that the information systems that produce more information are not relatively helpful but instead the tools, that help the knowledge workers to attend the information which is important or interesting, are valuable. In other words, there is more information available than the employees have attention to understand and apply and at the same time, finding the relevant information to solve the tasks is becoming increasingly critical. (Fischer and Otswald, 2001, p. 63.)

Fischer and Otswald (2001, p. 63) state that if the users consider the IT tools laborious to learn to use or the tools are difficult to modify to support the work practices, they may be locked into old patterns. The knowledge workers may end up using the tools that work as they want them to work and abandon the system that actually would better support knowledge work (Fischer and Otswald, 2001, p. 63).

According to Pawlowski and Robey (2004, pp. 646-647), the knowledge workers may also be unable to value, assimilate and apply different sources of knowledge. Therefore, the knowledge workers may find it arduous to use the technical solutions to gather information and hence, the information technologies may not support the knowledge work in the best possible way. Moreover, the usage of different IT tools for sharing information and communicating with others may be considered laborious and thus, the tools may not be utilised efficiently. On the other hand, the types of knowledge may challenge the usage of technical tools as much of the information that should be transferred within the organisation is tacit in nature rather than explicit so the information should first be brought to an explicit form. (Pawlowski and Robey, 2004, p. 647.)

#### 4.4. Summary of the key elements challenging knowledge work

In this chapter the key elements challenging knowledge work were discussed through the physical work environment, social, cultural and contextual elements and through information technology. Figure 8 illustrates the key knowledge work challenges studied in this thesis and the different concepts related to them.



**Figure 8.** Key knowledge work challenges and different emphasis of them.

First aspect that was studied was the effects of the physical work environment. It was discussed that many organisations lack the workspaces that support knowledge work efficiently. Poor physical work environment may challenge the tasks and the knowledge work actions that require concentration, such as planning, thinking, learning and analysis. Due to this problem the knowledge workers may choose their work environment for themselves. Some knowledge workers may work at home to carry out demanding and challenging tasks which require concentration and privacy. However, every organisation does not provide this kind of flexibility for their employees. In addition, the poor meeting areas may hinder the collaboration and interaction with colleagues. This affects negatively the team work performance which is integral part of knowledge work.

The challenges related to the physical work environment were discussed by using the categorisation which lists the certain attributes in the physical work environment that influence the knowledge work to some extent. The categorisation was based on four different groups: comfort, office layout, interaction and distraction. The first two

groups, comfort and office layout, represented the physical environment whereas interaction and distraction indicated the behavioural environment. These categories can also be considered as tangible and intangible entities so that the attributes in physical environment has tangible elements while those in behavioural environment include intangible factors. It was explained that the first group, comfort, includes natural physical aspects, such as heating, lighting and cleanliness. These elements are integral part of work environment and hence they do not actually improve or prevent knowledge work. If some of these factors, however, are missing or deteriorate significantly, all the knowledge work actions may be hindered.

The office layout was explained to provide a setting for performing knowledge work. Therefore, if the organisation lacks the efficient office layout, the knowledge workers cannot carry out their tasks properly. Lack of appropriate office layout may hinder the knowledge work actions that require concentration, such as planning, thinking, learning and analysis. On the other hand, the lack of poor meeting areas worsens the collaboration and interaction with the others. Finally, interaction and distraction were stated to have the most positive and the most negative effect on knowledge work. The office layout enables the interaction with one another but it also may cause the distractions within the organisation. Hence, there exists a tension between interaction and distraction. The interaction may enable one person's knowledge work but at the same time it may challenge or even hinder another's work execution.

The physical workspace may also be geographically distributed. This demands the knowledge workers to coordinate their work with the other in certain way. For example, differences in time zones may force the knowledge workers to work and communicate in a way that they really reach the colleagues. The problem in communication and collaboration due to the distributed physical work environment affects negatively the knowledge acquisition and knowledge sharing.

The second aspect that was studied in this chapter was the effects of the social, cultural and contextual elements to knowledge work. The social and cultural barriers were related to the rigid organisational hierarchy and poor incentive system that do not encourage and motivate the employees. The contextual barriers were associated to the situation in which the knowledge workers are unwilling to share and apply the knowledge that is obtained from the colleagues.

One element that hinders knowledge sharing in the organisation is the general lack of time to share it. Also, if the organisational culture is unfavourable the employees may believe that sharing knowledge could jeopardise their job security. This indicates the lack of trust in people and organisation. The unfavourable organisational culture may decrease the knowledge workers' willingness to share knowledge. On the other hand, the employees may not even understand the value and benefits of knowledge sharing. If

the organisation does not support the open knowledge sharing, the knowledge work actions such as learning, collaboration, analysis, knowledge acquisition and the application of knowledge, the employees may not understand or want to do them voluntarily. For example, learning happens often through socialisation in which the interaction and the sharing of tacit knowledge have a fundamental role. Hence, if the organisational climate does not encourage the collaboration, the learning process may be hindered.

The motivation and job satisfaction are correlated with one another. If the knowledge worker lacks the purpose and satisfaction to work, he/she may not be motivated to achieve the objectives. Therefore, both collaborative and individual work may become more unattractive to carry out. In addition, the relationship between autonomy, stress, control and salary was discussed. It was mentioned that higher autonomy may increase the stress and tighter control at work. This also affects the job satisfaction and may challenge the key knowledge work actions, such as learning and analysis. Moreover, this was mentioned to be the problem with young knowledge workers who typically are the productive core of the entire economy. Under the pressure and control they are required to perform better and better in order to get the autonomy and higher salary. This may affect the unfavourable competition between the young knowledge workers.

The information technology challenges needs to be discussed from the perspective of mobile and non-mobile work. While the knowledge worker is working outside the office environment, he/she needs to use mobile information technology tools to obtain the information needed. The mobile devices provide ubiquitous access to information but at the same time it may enable unnecessary and unproductive interruptions. This may prevent the knowledge workers to focus on their tasks. In addition, there is a lot of information available and it may affect the scarce attention. The knowledge worker may find it difficult to recognise the important information for him/her. There is more information available than the knowledge workers have attention to understand and apply. In addition, if the IT tools are difficult to use, the knowledge workers may stay in an old patterns. This may hinder creating new information, acquiring and sharing information effectively and finally the analysis and application of the knowledge.

As for the knowledge work enablers, it must be remembered that even though the elements were discussed separately they have however a close interdependence. For example, if the organisation provides the poor and distractive workspaces, it has a negative impact on the knowledge sharing. In addition, usage and appropriateness of information technology are connected to the employees' motivation. These elements and their interconnectedness will be taken into account in the empirical part of the study.

## 5. EMPIRICAL RESEARCH

### 5.1. Methods of data gathering

Empirical data can be collected in several different ways. Uusitalo (1991, p. 89) suggests that the research problem should be in a dominant position when considering the options for data gathering. Observation, survey, questionnaires, interviews and the analysis of existing codified research data are possible data gathering methods (Uusitalo, 1991, pp. 89-96). The empirical data for this study will be collected using an interview method. According to Hirsjärvi and Hurme (2005, p. 43-47), the interview methods differ from each other, depending on how structured the research process is and how much the interviewer controls the interview situation. Hirsjärvi and Hurme (2005, pp. 43-47) classify the different interview types into three different categories: formal interview, unstructured and semi-structured or theme interviews.

Formal interview method is the most widely used interview method. It is reasonable when the purpose is to test formal hypotheses and the research data is aimed to quantify easily. In this case, the researcher knows beforehand what kind of data the formal interview and the interviewee will provide. (Hirsjärvi and Hurme, 2005, pp. 44-45.) This study, however, follows the unstructured interview and particularly a narrative interview method. Unstructured interview method is commonly used in sociological and psychological studies. Questions in the unstructured or in-depth interview are open so that situation is very similar to a discussion. The researcher's role is to pose further questions to deeper the interviewee's answers and to build the continuity of the interview upon them (Hirsjärvi and Hurme, 2005, pp. 45-46).

Hyvärinen and Löyttyniemi (2009, p. 189) describe that the purpose of a narrative interview is to collect different stories or narratives for the research material. The narrative method is used for many reasons. One reason is to gain the insight of the past issues and to understand temporal matters. Furthermore, the interviewees' identities are amplified in the form of narratives and it directs the actors and the research into the future. (Hyvärinen and Löyttyniemi 2009, p. 192.)

The idea in the narrative interview is that the researcher's responsibility is to just listen carefully to the interviewee. In this situation the interviewee is a storyteller, rather than a respondent. The agenda is open in the interview and it may change and develop depending on the interviewee's experiences. The narrative interview can be done so that the researcher asks the interviewee to *tell a story*, he or she *gives room for narratives* or

*asks such questions* to which the interviewee answers with a story. (Hollway and Jefferson, 2008, pp. 301-303.)

The narrative interviews may also differ from each other. Hyvärinen and Löyttyniemi (2009, p. 192) explain that the distinctive characteristics may be the research subject (such as past, present or subjective themes), the interview technique (open or structured narrative interviews), the number of questions (one or unlimited) and the interaction between the interviewer and the participant.

In this study, the knowledge workers are interviewed individually. There will be four interviewees from each profession so the total number of interviewees will be 20. Each interview takes approximately 60-90 minutes. Interviews are held in August and September in 2012 and the data analysis is done after the interviews in October.

In the interviews, the narratives are based, on one hand, on the knowledge workers' education and work background and, on the other hand, on their present work. The idea in the questions is to explain concretely what happened, for example, yesterday during the working day and not to ask directly the participants to describe their average working day. Seidman (2006, pp. 85-86) discusses that this kind of method, targeted at particular aspects, leads more likely to valuable interview data. The further specified questions are related to possible knowledge work enablers and challenges. The questions, which were used as a basis for the interviews, are presented in Appendix 2

Using the narrative interview method, the researcher cannot influence and lead the interviewee to a significant extent. Indeed, the progression of the interviews is not excessively dependent on the researcher and her knowledge so the results are hence more reliable.

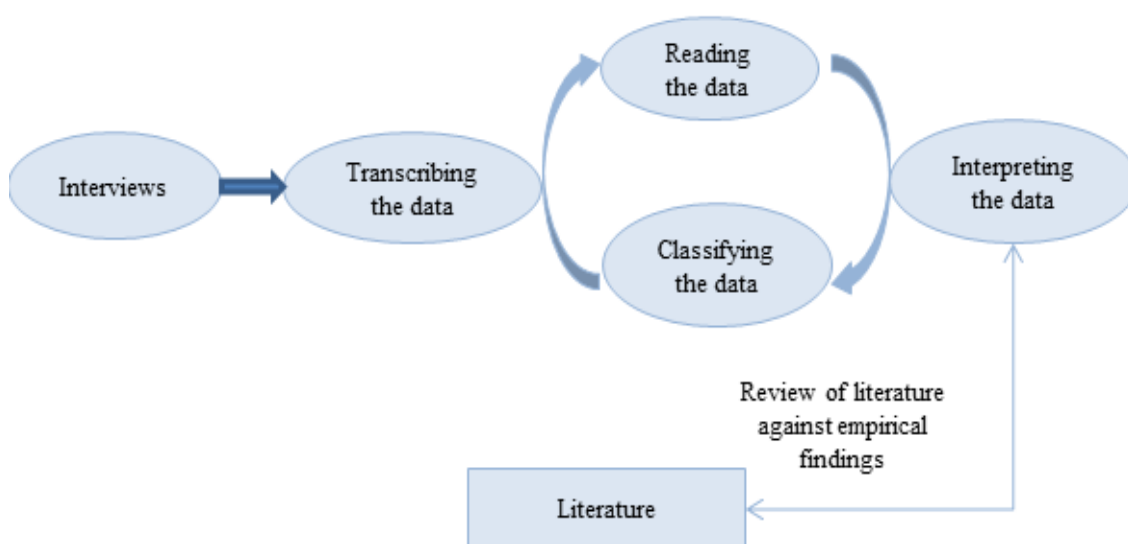
The chosen interviewees are presented in Appendix 1. It illustrates the different professions and their gender. The interviewees from the teacher's profession consist of two principals and two subject teachers. The principals do also teaching to some extent. Three of them were working in primary school and one of the interviewees was working upper comprehensive school. All of them were working in a public school. The principals' work consist more of administrative and managerial work so they have somewhat different perspective in the interviews than the subject teachers have. This, however, offers a versatile aspect on the teachers' work as well as to its enablers and challenges. The interviewed physicians consist of specialist in general medicine, company physician and two registrars in anaesthesiology and plastic surgery. One of them works in private organisation and the others work in a public health centre or in a hospital. Therefore, the spectrum of the physicians is diverse. The interviewed lawyers represent public and private firms. Three of the interviewed lawyers have a lot of managerial duties in their work since they are in a leading position in the company. The



pastors that were interviewed are working as parish pastors, chaplain or in a private organisation. Three of the pastors have also managerial tasks and two of them are vicars in the parishes. Two of the interviewed conductors are currently working with a professional orchestra while the other two conductors are working with amateurs. Three of them are involved in managerial tasks. One of the interviewed conductors travels every week overseas to make guest appearances while the other conductors travel occasionally abroad.

## 5.2. Methods of data analysis

The data analysis process is conducted in an iterative process. Figure 9 sums up and illustrates the data analysis process of this study.



**Figure 9.** The data analysis process (adapted from Kukko, 2012, pp. 17-18).

The data collected from the interviews is transcribed to the paper. The entire material is written down in order to maintain a coherent whole with its contexts. After that the content of the interviews are analysed based on the different steps presented by Tuomi and Sarajärvi (2002, p. 94). The analysis starts from the researcher's decision about the most important and interesting points from the research data and these aspects are found and highlighted from the material. The data-oriented analysis is used here so that the elements are raised from the material based on the purpose of the research. The points of interests are not decided beforehand and therefore, the analysis provides the possibility to obtain such results which did not come up from the literature review. The different highlighted factors are also grouped together and separated from other interview data. After that the findings are classified according to their themes, as the figure 9 illustrates. The elements are reduced and formed to meaningful entities. (Tuomi and Sarajärvi, 2002, p. 94.) The analysis is done using Atlas.ti software. This tool is

suitable to handle qualitative research data since it helps the researcher to find and explain the meanings. With the Atlas.ti software, the researcher can link her interpretations and findings together. (Atlas.ti, 2012.)

According to Tuomi and Sarajärvi (2002, p. 115), the data-oriented analysis is based on the interpretation and reasoning in which the process begins from the empirical data and proceeds toward a more theoretical and conceptual perception of the research phenomenon. In the conclusion of the empirical research, the concepts and categorisations emerged from the classification of terms are presented. In that phase, the researcher attempts to understand the concepts that really are meaningful for the research phenomena. (Tuomi and Sarajärvi, 2002, p. 115.) Indeed, the researcher strives to understand the knowledge work enablers and challenges in different profession from their point of view at the all stages of the analysis. The empirical findings are eventually compared to the elements emphasised in the literature review. Indeed, it will be discussed what are the aspects in the literature review that got realised in practise. Additionally, it will be indicated whether there are some elements that were not taken into account in the theoretical part of the study.

## 6. Empirical findings

In this chapter the empirical findings are presented in each separate case. It uses a lot of quotes due to the narrative interview method and because the interview material is analysed purely inductively. Indeed, the data is not analysed by using a pre-built theoretical framework. The aspects are divided into enablers and challenges depending on how they were emphasised in the interviews. Some elements may be considered both as an enabler and a challenge according to the interviewees.

### 6.1. Teachers

#### 6.1.1. The physical work environment is one of the key enablers of the teacher's knowledge work

The physical work environment helps the teachers work. It is essential that the facilities are appropriate both for them and for the pupils. It constitutes a concrete framework where the teachers may carry out their pedagogical goals. It gives the teacher the pedagogic autonomy and helps to create certain routines that facilitate the teachers' work. For example, the Teacher 3 said that it is a benefit to have an own class room because it is possible to keep the material in one place and she does not have to carry all the stuff with her from one room to another. As for the art and skill subjects, the physical facilities and resources are essential. In this case, the physical work environment may be widely distributed. When the equipment and facilities are in good condition, the teaching becomes more diverse. One interviewed principal, however, said that even though they are excellent facilities for teaching the pupils, there are no appropriate workspaces for carrying out the demanding tasks solely. The teachers have a common office but not the private workstations. Teacher 1 explained that this has been solved by acquiring new laptops and phones for the teachers which enable them to carry out their tasks regardless of the time and space.

I have my own classroom. Sometimes, however, I need to keep the class in a bigger classroom if I am teaching a bigger group of pupils. It is nice to have an own classroom since I can keep my stuff and papers there. No one else teaches there except me. Students come to the classroom quickly as the distances between classrooms are short. Own classroom and space are very important facilitators of my work. When I was teaching in a secondary school, I shared all the material with my colleague. I needed to get them always from one particular class and carry them to a different building. – Teacher 3

If I do the budget, I must turn my phone to silent mode and close my door. Moreover, when I do the timetables, I inform the others that I am two days off the school. In practice, I however work normally. During these two days home is the best place to focus and then I have time to do the work in privacy. Also, the teachers do not have here a proper workspace which let them work in privacy. We have here an office but not the private workstations. This has been a problem for the teachers but we have acquired the laptops and phones for them, so they work at their classrooms or wherever since we have wireless connections. – Teacher 1

Information systems have increased their importance in teaching. In particular, the different information systems are used for sharing information internally within the school as well as externally between the school and the home, as the Teacher 4 described in the interview. One teacher said that the usage of information systems is so efficient that the school staff does not need to meet face-to-face that often anymore. According to the interviewed teachers, by using the information system in the school, the teachers are better aware of the possible changes in classes. In addition, the teaching material is increasingly available on the Internet. Typically the teacher and also the pupils have the user accounts for a learning platform. In the teacher's case, he/she does not have to carry so much material with him/her. It is enough to have the access to electronic teaching material. On the other hand, the pupil may carry on learning at home and do there extra assignments to improve the learning. This enhances the teachers work relatively much and the phenomenon is becoming more and more popular.

We have the Wilma system which is commonly used in many schools in Finland. It is intended for the internal communication within the school as well as external communication between the school and the parents. It has been used for five years now and it has been developed continuously to better serve its purpose. It works quite well in our school and the teachers are satisfied with it. All the teachers use it every day. – Teacher 4

Information technology has increased its role significantly in good and bad. Earlier, the things were sent via post and we had more time to respond them. Today, these same things are sent by email and they must be treated within hours. Since everything has to be done quickly and effectively, I think that the quality of work may suffer a bit. Information technology facilitates, however, the knowledge sharing. I do not have to remember to tell the things separately when I have sent them directly by email. We are going to work in the paperless office in the future. I use already less paper than before. – Teacher 1

Other people affect always somewhat the motivation and satisfaction to work. The nature of teacher's work set the teacher to act with other teachers, pupils and the

parents. All the interviewed teachers explained that the pupils have possibly the greatest impact on the work motivation. Teachers said it to be important that the teacher enjoys working with the pupils. In addition, the interviewed teachers often emphasised the typical characteristics of their work as a motivational aspects in their work. The principals told that they are motivated to organise and develop things. On the other hand, one interviewed teacher said that it is pleasant to work within the clear framework and fair rules. Therefore, the principal and teacher enhance the each other's work. One teacher who is the teacher of an art and skill subject is motivated on that his own subject, physical exercise. He said that he is interested in the different sports and is motivated to introduce these sports for the pupils.

The people, who I am working with, affect my work the most. I feel comfortable with my pupils which I think is important. In the basic school, there is a framework in which I may carry out my responsibilities. There is a set of rules that the pupils are expected to obey and if they are not followed, there are certain consequences. As a teacher it is easier to me that we have clear rules. – Teacher 3

In general, the teaching follows the national core curriculum. This plan defines the basis on which the pupil can be transferred to the next grade. One interviewed principal explained that the national core curriculum is, however, only the minimum that the school complies. Normally, the curriculum is always edited relevant for each school. According to the interviewed teachers, the national core curriculum does not set the strict frames to their work. It rather clarifies their work. For example, the textbooks are often done to follow the curriculum. One teacher, who is working as a subject teacher, wished that there could be a few more hours reserved for the English language. Currently, some pupils fall behind the others and they would need more training. This is, according to the teacher, distressing.

As we follow the national core curriculum for basic school, it is the minimum that we follow. We have shaped it characteristics for our school. We emphasise the certain things such as the natural sciences. The national core curriculum form the teaching as we know what is required that the child may be transferred to the next grade. It facilitates the teacher's work a lot. The national core curriculum for the basic school has however the things which are valid only in the large cities. – Teacher 1

Teachers need variety of information in their work. First of all, they will have to manage the certain school subject well in order to teach it to the pupils. The both principals that were interviewed explained that they also need the factual and legal information. They said that it is essential to know what is right and what the school and the school staff may do so that they do not break the law. In addition, another principal

said that he needs practical information on how things work in the municipality and how it affects the school. Teachers also mentioned that compared to the theoretical know-how it is more important how they can convey the information to the pupils. Therefore, the teaching techniques and encountering with the pupils have more weight. On the other hand, social skills and the ability to cope with the pupils are in essential role in teacher's work. It is important to get the pupils excited about the subject and the lesson. Here, the social skills facilitate the teachers' work.

I need to be aware of different laws and regulations. I need to check these often since they may change. In addition, I need to know about the children's education and pedagogy as well as to have good interpersonal skills. These all help me to see the important things as a comprehensive whole and organise work. – Teacher 2

I need information about the pupils and students, and their personalities. I need to know how they behave in different situations. Compared to theoretical knowledge and the substance expertise, it is much more important to have good social skills. It affects how well you are able to cope with different pupils and students and get them excited about things. The substance knowledge is evidently important but it is also important to get the pupil/student inspired about the lessons. Social skills are, therefore, the most important skills in this work. – Teacher 4

The positive work environment and colleagues help the teachers to cope with their work. Some of the interviewed teachers mentioned that it is important that they are listened at the workplace. In addition, the teachers need to respect each other to maintain the positive atmosphere at the school. The negative work environment has also an impact on the pupils and the teaching. Even though the teachers work privately the context of their work is social and that is what typically motivates the teachers. The Teacher 1 explained that there is a supportive climate in his school and it is conveyed to the pupils. If the teachers teach the same school subjects, they may do co-operation. The work done together is much productive if the colleagues come along with one another. The co-operation between the teachers brings also the pupils closer together.

I like the social framework of this school that is why I did not want to stay to the place that I tried for a few month. Therefore, I came back to this school. I am not used to work in solitude but merely with the other people. Even though, I cannot talk about all the matters with the teachers, they still recognise if I have hard times at work and they come support me. It is also great feedback that the substitutes praise our work environment. I think that the good atmosphere among the teachers is conveyed to the pupils. – Teacher 1

With the colleagues it is possible to share information and ask for advice in difficult matters. The social network can exist with the organisation but it can also be widespread. Most of the interviewed teachers emphasised the importance of network in their work. Often the teachers contact their colleagues who teach the same school subjects and often they can know each other since their studentship. It is also possible to meet the colleagues in the common events of different schools. Teachers mentioned that the network is important since the nature of their work may be relatively solitary. They said that is convenient to listen how the colleagues have acted in certain situations and what kind of pupils they have had. The teachers also share experiences on how they have solved the problematic issues. In addition, the principals emphasise the importance of broad network in their work. For example, one principal said that another principal in the same municipality is his closest mentor in work. He communicates also with the other principals in Finland who are leading the schools of the same size. Another principal explained that when she started as a principal in a new school she contacted often her old supervisor to ask for advice.

My closest mentor in the work matters is another principal working in this town. In addition, I have many familiar principals in Finland from who I can ask for advice on how to handle things. Particularly, I know many principals who work in the schools of the same size as this one. Having the network is really important in my work. I do this work here alone and sometimes there are situations in which the teachers do not know how to help. Then I call to another principal and talk about the things. My colleagues also call me often and ask for advice on matters. In this town I act as a link between the principals or schools. With the principals we have a meeting once a month where we share information and mental well-being. – Teacher 1

To sum up the key enablers of teacher's work, the key enablers are related to appropriate physical work environment, information systems, the national core curriculum, the factual information and social skills, positive work environment and networks. In addition, there were mentioned different aspects that enhance the interviewed teachers' motivation. Most of the enablers facilitate the teaching and getting along with the pupils. Moreover, some of the enablers affect the teacher's wellbeing at work.

### **6.1.2. Difficult pupils and their parents challenge the teacher's knowledge work**

One typical feature of the teaching profession is that there are not often vacant positions available. Instead, there are typically more temporary posts available. This affects the teachers' career advancement. One interviewed teacher explained that some teachers stay at the same workplace throughout their entire career. Once the teacher gets the

permanent post, he/she may not want to leave it. However, this may eventually turn the teacher passive. One interviewed principal, in turn, told that he is likely to give the teachers the leave of absence if they want and at the same time the opened doors to return. Then the teachers are more motivated and satisfied with their job. The teacher 3 said also that if the teacher have the permanent post, it is harder to change the workplace. In addition, the competition of the vacant position affects the difficulty of changing the workplace. Another teacher however argued that the permanent post is safe and once got the post, it is not cut easily.

One disadvantage of this job compared to enterprise work is the fact that in practise the teachers cannot advance in their career in the same way as it is possible in other fields. In addition, it is difficult to change the workplace because there are not vacant positions available. Quite a many teachers are in one particular place throughout their career. I cannot help thinking whether there could be possible to get a job from other fields since in this field, here are so few vacant positions. Additionally, the competition of the position is tough. There are many candidates per one position. The number of vacant positions depends on the area. For example, special education teachers can get the job easier. This is disadvantage in general level. I myself have not got this problem, at least not yet. –Teacher 3

The teachers educate themselves at the university in order to get the qualification to perform in the teacher's profession. Many of the interviewed teachers said that the university education is relatively theoretical which does not correspond to the practical work particularly well. However, it provides the basic know-how and skills to work as a teacher. All the interviewed teachers discussed that the real experience from the teacher's work has been obtained the best through the work experience. According to the interviewed principals, the teacher's education does not relate to the principal's work. It does not have any leadership training which is essential in the principal's work. As work experience helps the teacher to educate the pupils more naturally, the work experience was mentioned to be a facilitator in the principal's work in leading the school.

Through the education I obtained moderately good tools for the teacher's work. However, it did not provide any leadership training which is essential in my current principal's work. Everything that I have needed as a supervisor, I have learned by myself. When I was younger I ran the school as it seemed to be the best to me. It was not that difficult but actually I did not know anything about it. Now, I feel that I have a strong vision on how this ship is steered. – Teacher 1



The financial matters affect evidently the schools' performance. In particular, the financial matters have an impact on the kinds of resources with which the school may aim to its objectives. The financial issues are a challenge in the principal's work as well as in the teacher's work. The principal typically creates the annual budget for the school and plan how the certain amount of money is used during the year. One interviewed principal said it to be frustrating that sometimes his job in this respect is not trusted. In addition, he mentioned that the financial resources given to the school do not meet today's requirements. On the other hand, in the teacher's work the financial challenges are shown so that the class sizes are growing year by year like the Teacher 4 explained. As the class sizes increases, it affects inevitably the quality of teaching. In addition, it was stated to be problematic that the amount of weekly hours of certain school subjects is questioned. One teacher explained that some decision-makers do not understand the importance of art and skill subjects. They, however, are essential in educating the pupils and students socially.

It is very frustrating that when do the annual budget, I have to listen every year how bad economic situation this town has. I understand that money cannot be used too much but I would argue that, when the money is given X euros to me, I know how to plan its use in a sensible way. People do not always trust me in this sense. We are required to act in a way that was working ten years ago but not anymore. We have to give a lot but we are not given the resources to really do it.  
– Teacher 1

One thing, that facilitates my work, is the reasonable class sizes. This has developed to another direction since the municipality does not have the resources. For example, a few years ago I had the groups of 15 pupils but now I may have 25 pupils in one group. Then, the way of teaching changes considerably. – Teacher 4

The teacher's work can be mentally demanding. It may also be difficult to shake the difficult matters for the leisure time. According to the Teacher 2, sometimes teacher can be very close to the burnout. There are certain things that can help the teacher to cope with their challenging work. As the Teacher 2 explained, the long holidays are always necessary for the teachers. However, it takes time from the teachers to get rid of the work pressure even on a holiday. One teacher mentioned that it is impossible to become immune to the difficult things. They may bother the teacher for a long time. Most of the interviewed teachers explained that, for example, the difficult pupil cases are typically taken more personally at the beginning of the career than as an experienced teacher. This kind of challenging matters happened while the teacher was more inexperienced remain typically in their mind for a longer time of the period. Some teachers said that they may still wonder these pupils and the issues that happened at their early career.

It is really personal how the teachers cope in this work. There are evidently many who are close to burnout. Holidays are always important during the year. In the autumn the most teachers are energetic but each spring the tiredness starts to weight. In the summer it takes a long time to get rid of the matters relating to work. This is an investigated fact. – Teacher 2

Teachers must cope with the fact that they need to always teach very different pupils or students. Some pupils may have, for example, weaker skills in certain subject and teacher may not necessarily have enough time to help them. Teachers have to proceed in the teaching in a certain pace, as the teachers explained in the interviews. Some pupils may require a special attention from the teacher while the teacher should also take the rest of the class into account. The pupil may also be behaviourally disturbing. According to the interviewed teachers, this problem has increased its role in their work. As the Teacher 4 explained, the pupil or the student may interrupt the teaching and often the caused problems are not necessarily related to that school subject. The disruptive pupils take the teacher's time and at the same time the teaching may suffer. Due to the difficult pupil cases the pupil welfare has increased in the teachers and the principals' work. One principal said the small proportion of the all pupils is consisted of the difficult pupils. They require a lot of work done from the principal and teachers. Often, the problems are not the pupil's fault. Unfortunately, the principal and the teachers cannot influence the parents. The pupil has to go through the treatments because of his/her parents.

In teacher's work the industrial peace is a questionable concept. It depends on the groups being taught. Pupils cause interference in the class to varying degree. There are always those pupils who cause more problems that require discipline. The problems do not necessarily relate to the actual school subject. It takes the teacher's time and more there are these cases the more the teaching suffers. It makes my work difficult. – Teacher 4

The pupil welfare is most challenging in my job. If we have the 100 per cent mass, the five per cent of it indicates the problem cases. A lot of work is done with them and this is absolutely the most difficult part of my work. I could have used six years of taking care of a child. The child may have moved forward but the family has not changed in any way. Often, the problems are not the child's fault. Unfortunately, I cannot influence the parents. The child has to go through the treatments because of his/her parents. – Teacher 1

The increased power of pupils and parents in relation to the teachers and the school has grown its significance in recent years. It makes the teachers and the principals work more difficult. All the interviewees discussed that the pupils and their parents have nowadays more rights than responsibilities compared to the teacher. In addition, they

are also well aware of their rights but do not necessarily care about their responsibilities. One principal said that particularly the parents, who are well-educated, rich and are familiar with the law, are accurate about their own rights and are relatively considerable challenge in the teacher's and principal's work. According to the interviewed teachers, some of the conflicts are handled in media or in the court. The parents demand the teacher to bend the rules according to their child's needs. In addition, they advise the teachers on how their child should be grown and taught, like the Teacher 4 explained. All the interviewed teachers said that it is a challenge how the teacher may intervene if the pupil does not comply with the common rules. The teachers may not have the ways to control the pupils which makes their work difficult. Teacher 4 told that this change has affected inevitably the teacher's performance. Teachers perform more and more often in a way that it would not raise the conflicts with the parents.

The pupils' and teachers' increased power raises its head every now and then. For example, if you talk about the disciplinary techniques, the fact is that the teacher may give the detention or reprimand if the pupil does wrong. However, it does not matter, if it is not reacted at home. If the parents do not care, then the children do not care either. Nowadays, the pupils and students are well aware of their rights, but it is rarely remembered that there are also obligations. It seems that the parents know this too. They are very eager to defend their rights and do not appreciate the school's work. They are quick to criticise the school's and teachers' work and to provide advice to the teacher. Such a phenomenon has increased in recently. Therefore, I must say that I have been thinking how I can do my work and act on the lessons without getting conflict with the pupils' and students' parents. I try not to think this too much so that it would not affect my performance too much. Sometimes, I for example have to give my reasons of the pupil's grade for the parents. In some situations I also have to consider how I communicate with the parents. Today, I must think these matters more than before even though I should not pay too much attention to them. – Teacher 4

The main challenges in teachers' work are related to the career development, the principal's leadership training, financial matters, mental heaviness of the work, difficult pupil cases as well as the increased power of pupils and parents. These elements have a negative impact on the teacher's core responsibility, teaching the pupils. In addition, some of the elements may increase the teacher's work load and stress.

## 6.2. Physicians

### 6.2.1. Positive work environment and the motivation to the continuous learning enable the physicians' knowledge work

The open and straightforward management may improve the employees' performance. According to the interviewed physicians, the management culture facilitates their work considerably. One of the interviewees said that the chief physician takes clearly the leadership role and organise and improve things. On the other hand, the chief physician is flexible of the other physicians. For the physician it is important to feel that the management culture is comfortable. According to one interviewed physician this may be improved so that the chief physician meets the other employees and talks with them informally. In addition, the physician's work is facilitated considerably if the chief physician can be contacted easily if the employees have any questions. One physician highlighted the organisation's management culture as open and positive. The organisation has a good vision and values which constitute the basis for the organisation's all operations. She explained that the information is communicated from above to down. The employees are given a lot of responsibility and autonomy and at the same time the supervisor supports the employees' work.

We have a really good chief physician, who is a good leader. He knows how to take the leadership role and to determine and organise things. He is also flexible for the employees. In addition, he is willing to reform the operations here. – Physician 3

This is a typical professional firm. Hence, we are given a lot of responsibility and autonomy and at the same time the supervisor supports our work. The employees really enjoy working here. – Physician 1

According to the interviewed physicians, the colleagues and good work environment facilitates the physicians' work significantly. If the atmosphere is positive the physician enjoys working more. As for the physician it is important to be able to work individually as well as in teams. Therefore, the positive work environment is essential. One physician explained that their work is usually done together with the team and hence, it enables the work if everyone gets along with each other. If the work environment is positive, the physician may ask for advice and acquire the information more efficiently. Another physician explained that she can talk to the colleagues and ask for an advice. Moreover, they may criticise each other face-to-face and say opinions on the matters. The specialising physicians often talk and plan things together, according to one interviewed physician. They are also willing to work and develop themselves and they are flexible if the schedules changes rapidly. In addition, the specialists do not have

threshold to come to help the registrars. The open communication and positive work environment is also the patients' benefit.

My work is facilitated by the fact that the specializing physicians can easily talk to each other and plan things together. Moreover, everyone is willing to work and develop and we all are flexible to the rapid changes of the working day. In addition, the specialists are always ready to come to help the registrars. They do not have a threshold to help us. This facilitates significantly our work. This is also the patients' benefit. The cooperation works here in every respect. – Physician 3

In the medical work, the physician meets constantly new people, creates a confidential climate with the patient and strives to help the patient as well as possible. This requires the ability to get along with people. All the interviewed physicians said that the interpersonal skills are important in medical work. The interpersonal skills are needed in patient work as well as in the team work with the colleagues. It is important that the physician can face the patient as an individual. High expectations and wishes are indicated to them and often the patient's issues are not related to medicine. This, the physician needs to be able to explain to the patient. In addition, physician must be able to inform the patients about the negative matters. The interviewed physicians told that they need to get the people to tell them their affairs. One physician also mentioned that the interpersonal skills can be improved and it essential for the physician in order to perform in the field successfully. Own personality helps in the development of interpersonal skills. Moreover, she explained that the physician's work may turn out to be too heavy if the physician does not develop his/her interpersonal skills. In addition, the teamwork cannot function well if the interaction between the colleagues does not work. Therefore, interaction and interpersonal skills are the enablers of the physician's work.

I think that the interpersonal skills have the most important role in the physician's work. The physician needs to know how to listen to people and how to get people to tell their issues. The patients need to open up to me about their problems since for example the headache may be related to another matter that the patient does not want to share with the physician. This is important in the physician's work. If you are not very skilful in interaction, this work cannot be performed successfully. The interpersonal skills can be learned and developed. Own personality must be known so that the physician may use it in interaction with the others. There are also people who never learn to interact and they are sooner or later eliminated from this field. This work gets too heavy if the physician does not develop his/her interpersonal skills. – Physician 4

The interpersonal skills have an important role in my work. It is difficult to perform as a team if the interaction does not work. Interaction is related to the everyday work and the fact that things functions well. It is important that everyone gets along with each other. There are immediately negative atmosphere at the operating room if some colleagues have problems with each other. – Physician 2

The work experience and the ability to separate the work and leisure time enable the physicians work and help them to handle the hard patient cases better. The interviewed physicians mentioned that it is essential to know how to break free from the work. Work and leisure time is important distinguish. In addition, the work experience helps to handle the hard patient cases better. Physicians explained that it is difficult to get rid of some of the hard patient cases and they are often thought at home. They said, however, that if the issues are considered for too long, the physician may become unable to work. With the difficult patient cases the physician must be able to act rationally. They also said that it is possible to become immune to the difficult cases through the work experience particularly if some cases are repeated often enough. First the cases may touch and affect the physician more but as soon as they have become routine-like they can be regarded better. The interviewed physicians explained that for some physicians it is difficult to get rid of stress. Hence, they may even change the field. They also told that leisure time activities and hobbies help the physicians to temporarily get rid of the heavy workload. In addition, talking with the colleagues helps to deal with the difficult cases. The physician's work includes constantly responsible decision making. Through the work experience it gets more certainty. According to the interviewed physicians it is possible to learn to examine the hard patient cases comprehensively so that one will not however become cynical. If the patients are considered too emotionally, things may become distorted.

I may think some patient cases afterwards at home. If the patients have been children, I notice myself thinking of them at home. Otherwise, the things cannot be considered for too long because it may turn the physician unable to work. The physician needs to move forward with the matters. In the actual situation the physician may not dwell too much on the patient's issues but the case has to be handled rationally. It may be thought afterwards but in the situation the physician must just act. It is possible to get immunity to the hard patient cases especially when you see a lot of certain things. Initially, they may affect you more but the more you experience and repeat the cases the better you are able to regard them. – Physician 3

This work is stressful. Quite a many leave this field since it may become impossible to get rid of stress. Physical exercise helps me to get rid of the stress after working day. It does not always work but I try to do something which

requires so much focus that I forget my job. If I did not exercise at all, I would not work here anymore...In this work the physician must not become too cynical since then it is impossible to help people. However, it is essential skill to be able to leave the patient cases at work and separate the work and leisure time. I am able to identify too heavy patient case. Then I discuss with colleagues about the matter and how I should work with it. There are always ways to move forward from the painful situations. – Physician 4

The information related to the medicine changes and evolves all the time. In order to handle the amount of information in medicine, the physicians raised different methods in the interviews. First of all, one physician mentioned that the general practitioner has to cope with the uncertainty. It is evident that the general practitioner cannot handle all the information and update it regularly. Therefore, she said that if it is difficult for the physician, then it is better to specialise to a particular sector. For the general practitioners, it is essential to know who to consult and where to seek the important information. The second physician, in turn, explained that the specialisation increases the motivation when the physician knows the particular area well. He told that otherwise the focus would probably be at the lower level when the physician cannot control everything. The Physician 1 told that because of the amount of information in medicine she feels that she is not able to update all the information. That is why she has only adult patients and not children. She also highlighted that the physician needs to understand what he/she does not know. Then the physician is better able to consult the other specialists. She also mentioned that the trainings help to obtain the up-to-date information about topical issues. The fourth physician explained that she needs to be aware of new information, methods and actions which emerge constantly. She needs to be ready to learn and find out new things. In addition, they have different areas of specialisation and they consult each other frequently.

The general practitioner has to cope with the uncertainty. This work cannot be handled if the physician does not stand this uncertainty. The kind of person, who wants to know for sure how things are, is not able to stay as general practitioner. Then it is better to specialise to a particular sector try to achieve an excellent know-how in it. For the general practitioners it is essential to know, where to seek the information they need. They need to know who to consult in order to build the information to a comprehensive whole. – Physician 4

New information, methods and actions come up constantly and we need to be aware of them. In addition, I need to be ready to learn and find out new things. We have here different areas of specialisation and we consult each other all the time. – Physician 3

Motivation is important enabler in carrying out the tasks. The interviewed physicians considered their work interesting. According to one physician, she knows that she has chosen the right occupation and right field of specialisation. She said to enjoy doing the surgeries. In addition, the continuous learning and positive work environment promote the physicians' motivation to work. The interviewed physicians were motivated to learn new things. For example, the physicians who are still specialising explained that the specialisation phase will bring still many new things and they both have the willingness to develop their know-how. Furthermore, the physicians told that it is motivating to get to be with people. The physician's core work is about to listen and to help the people with their problems and this was considered one of the most motivational aspects of the interviewed physicians' work. They also discussed that their work is also creative and versatile. In addition to the strong theoretical know-how, the physicians need also manual skills for example to the different operations. One physician appreciated her autonomy to work independently without the supervisors' control. In addition, she said that is able to train and develop her own expertise and the organisation supports it.

I am currently still specialising so I know that all the new things are to be come. I am motivated as I know that I will learn new things and I have the willingness to develop myself. – Physician 2

This work is rewarding, the days are different and I get to be with people. This work is also creative and really versatile. Also, the fact, that I am able to influence my work and no one watches my performance, motivates me. We are supported to train and develop our own expertise. – Physician 1

All the interviewed physicians mentioned that information technology has grown significantly in importance in their work. The usage of different information systems is a necessity in the physician's work. The physicians explained that almost all the information is available in electronic form. This has facilitated and accelerated the information acquisition. For example, the all patient information, laboratory results and the X-ray pictures are stored electronically. The physician may get the laboratory results quickly straight to the computer which enhances the patient work. It is also possible to find information about the diseases and the symptoms. With this help, the physician does not have to flick through the pages of the medical books. Therefore, the information acquisition is enhanced significantly with the information technology.

Information systems facilitate my work concretely. If the information systems did not work, I would not know the patient who is sitting in the waiting room. I would have no knowledge of anything. There are all the information and operations in the information systems. When they do not work, I would need to write down everything about the patient. The recipes would also be written by hand. I would not know the patient's medication unless he/she himself



remember it. The patient work would slow down substantially. Fortunately, this does not happen very often. – Physician 1

The core enablers of the physicians' work are related to positive management culture, interpersonal skills, information systems, work experience, the ability to distinguish the work and leisure time, work climate, learning and specialisation. In addition, there are different factors that motivate the interviewed physicians in their work. The key enablers of the physicians' work are primarily affected the patient work.

### **6.2.2. Busy and stressful work are the key challenges the physician's knowledge work**

The physicians' work schedule is often urgent. Particularly, the patient work is busy for the interviewed physicians. They all mentioned that there is not enough time between the patients to carry out the paper work. The Physician 1 explained that the extra patients may also confuse the schedule. The physicians are required to take the extra patients if they are available at the office. Thus, the physician may allocate less time for the other tasks. Furthermore, sometimes it has been reserved too little time for the patient's matter so the time for the normal appointment is not enough. It affects the schedule of the rest of the working day. Therefore, the Physician 1 stressed the importance of allocating enough time for different tasks. As the work schedule is busy for most of the interviewed physicians, they told that the paperwork is often postponed to carry out at the end of the working day. The specialising physicians told that their working time is very regular. However, the Physician 3 said the working time does not contain any flexibility. The physicians need to commit the working time and they themselves must be flexible. During the working day the schedules may vary greatly. For example, the operations may stretch longer. These changes may cause confusions among the medical personnel. Even though, there have been made plans and schedules for the surgeries, they may change which causes urgency for the end of the day.

Here we are often required to take extra patients if we are present at the office. Hence, it is difficult to focus on the other tasks. As the schedules are already delayed, the other tasks may not get so much time. Therefore, the scheduling issues affect my work significantly. The predictability of the work is important and that the tasks are allocated enough time. For example, the transition time to the meetings needs to be taken into account. Sometimes the patient cases may take longer than 20 minutes. Still, I cannot interrupt the patients and thus the appointment may take even 50 minutes. It affects the course of the rest of the working day. The schedule problems affect also stress. – Physician 1

The regular working time is a good thing because basically I have a daytime job, excluding the duties. The working time, however, has no flexibility. I need to be

at a certain time in the workplace. The operating theatre starts to operate at a specific time so we must necessarily be present then. In the afternoon, on the other hand, I cannot just leave so then I need be flexible. Therefore, this work is very binding and I need to often make backup plans and be flexible. During the working day the schedules typically change. For example, the operations may stretch longer or they may be shorter than planned. These things affect the schedule of the following operations. It is very difficult to estimate how much time the operation takes not matter how many of them had been done. – Physician 3

All the interviewed physicians said that information technology is nowadays so important in their work that the work could not be done without it. Even though, the information technology is an essential enabler of physician's work it may cause a lot of barriers to the physician's work. The barriers are specifically related to the obtaining of the information. One physician said that she would not know in advance anything about the incoming patient. In addition, she would need to write everything down manually. The physicians also told that there are often different information systems in different workplaces and the physicians need to spend time to learn to use the systems. In addition, this learning is normally done alone without a proper orientation. According to the interviewed physicians, the information systems are typically stiff and there are different systems for different actions. Then, they may need to copy the data from one system to another. This slows down the work. Furthermore, as the information systems do not communicate with each other, there may not be information about the patient available when needed. Most interviewed physicians mentioned that this frustrates them especially when the information would be needed quickly. The interviewed physicians explained that there are frequently problems with information systems and the duties may even become impossible to carry out. Since all the information is now available electronically the problems may even cause dangerous situations.

I cannot do anything without the computer. Therefore, if the systems do not function, it is almost impossible to carry out the duties. If I am at the emergency room and cannot get the patient's picture opened, the situation is impossible. Then, I cannot know where the patient has the fracture. This happens very often and it is really dangerous. The physicians complain about this all the time but the software suppliers cannot do anything with it. The use of information systems has grown and the importance of them has increased all the time. When the information systems become more common they were used parallel with the papers. Now the papers are used less frequently and everything is done with the information systems. In health care there are generally a lot of different information systems and normally they do not converse with each other. This is annoying because we cannot see what have been done to the patient for example

in the health centre. It would be helpful if the systems work and communicate with each other. – Physician 3

The knowledge workers tend to often carry their work to home and think about it during their leisure time. Many professionals have such a strong professional identity which may make it difficult to separate the work and leisure time. Some of the physicians mentioned in the interviews that they want to separate their work and leisure time. However, in their leisure time their strong professional identity comes always with them. Two physicians told in the interviews that they do not want to say their profession aloud because it usually affects the people's attitude towards them. One physician also highlighted the importance of clear limits between the work and leisure time. Being able to separate the work and leisure time, the physician is better able to handle his/her work. It also helps the physician to get energy to meet the patients with full efficiency.

In my leisure time I am always a physician. I do not even want to say that I am a physician because it affects the people's attitudes towards me. The physician's professional identity is pretty strong and it is always with me when I go somewhere. However, I do not necessarily want to bring it up because it spawns certain things. The patients also have certain expectations of the physician. This is, however, my occupation, which I need to do. – Physician 3

The physicians' concentration, efficiency, leisure time and working time are somewhat related to each other. For the most interviewed physicians the working time is directed so that the administrative work and the paperwork may be done at the end of the working day. Then, the concentration may be at the lower level. For example, one physician mentioned that she needs enough sleep to be able to do the intellectual work after the actual working hours, such as writing reports. She said that if she does not have enough energy, the reports come completed more slowly. She said that the concentration is not at its best after the actual working day. The physicians said that the reports, however, must be normally written then since the patient work is so busy. Some physicians have made the clear decision about the working hours. The Physician 1, for example, said that even though her concentration would not be at the best, she aims to finish the paperwork during the day. This is because the accumulated amount of work causes stress for the physicians. Some physicians, like the Physician 4, however try deliberately to limit the working hours. Thus, they leave the unfinished paperwork to wait for the next working day. As the paperwork tends to build up, the Physician 4 comes to work at weekends when her concentration is not disturbed. Therefore, the working time is unevenly distributed between the patient work and administrative work. The physicians recognise this challenge and try to respond to it differently. This problem may cost the physicians in terms of lack of concentration and quality of work, longer working hours and increased stress.

I can see it right away if I have not got enough sleep. Then the work is just done more slowly. The reports are occasionally tedious to do especially if I have to start doing them after 4 p.m. When I have first worked from eight till four and then I start writing the reports, then thinking and concentration do not work so efficiently. The reports are done much slower. – Physician 1

If I do not have the emergency duty, I try to limit my working time from eight till four. Because of my age I am no longer able work that much and therefore I try to limit my working time. You are able work efficiently eight hours but after that the productivity begins to fall. Usually, I stop working at four o'clock and I leave the rest of the paper work on the table. Then I continue the paper work on the morning. I limit my working time consciously since if I would do everything I should, I would stay here for much longer. Work tends to build up and so sometimes I might come here on Saturdays. I may finish the paper work then quickly because I know that I will not be disturbed. – Physician 4

The physician's work is typically intellectual and autonomous work. However, the physicians' work and the concentration can often be disturbed by different aspects. The interviewed physicians' explained that their work is interrupted relatively often. The most common reason for the disturbance was the telephone. One physician said that now she can work in peace and the nurses do not interrupt her work by walk in to her room. She also has telephone hours so that the normal patient work would not be disturbed by the phone calls. Many physicians however do not have the same kind of working peace as the Physician 1 said to have. The interruptions may occur regularly during the working day. The typical interruptive elements in the physician's patient work are the phone calls and the nurses who come in to the physicians consulting room to ask for something. This suspends the patient work. In addition, as the physicians do not have enough private time to do the paperwork between the patients, the work is accumulated. Moreover, two of the interviewed physicians, who are typically working in the operating rooms, told that the phone rings constantly and the physicians are required to answer to it, even in the operating room. The interruptions slow down the performance of the work and interfere with the concentration.

Here I may work in peace. I have also worked in the organisations where the nurses just walked in to my consulting room. It interrupts always the patient work. The telephone disturbs my work if it rings. This is why we have telephone hours. In addition, we aim that there would not be that much telephone traffic since usually all the extra disturbance have a negative impact on the patient work. – Physician 1

My work is interrupted quite a lot. For example, nurses may interrupt doing the dictation and the phone may ring during the surgery. We all have a company

phones and they ring all the time. This of course slows down the performance of the work and interferes with the concentration. In this case, the idea may be lost and the work can be difficult to get back on. During the surgery, the work stops completely if the phone rings. The phones must be answered even though I would be in a surgery. – Physician 3

The physicians assessed their physical work environment in the interviews. The interviews revealed a great difference in opinions and it seemed that one reason for this was the fact whether the physician is working in a public or a private organisation. One physician who worked in the private organisation said that she indicates the physical work environment as a positive issue. They had just opened a new office so everything there is new and tidy. Even though she did not have a big consulting room she enjoyed working there. Often, the hospitals and health centres may suffer from the lack of space. For example, two physicians who work in the public organisations mentioned that their physical work environment was not relatively good in this sense. The other one told that she does not have own workstation. Instead, they have a common office for the specialising physicians. She explained that this office is, however, too small and there are too few computers. She said also that the computers are essential for their performance and that is why the registrars' office should be better-equipped. On the other hand, the common office help the physicians to better communicate with each other when they see each other more often. Another physician who is working in the public organisation said that the building is physically worn-out and old. There is a shortage of space. One reason for the lack of appropriate workspace is the increase in the population in the certain city and the increase in the number of people requiring medical treatment. For example the closets and toilets must have been made the consulting rooms and warehouses. The poor physical work environment affects the patient work since the physician cannot take too many people in her room at the same time. In addition, the vacant positions could not be fulfilled due to the lack of space.

When considering the physical work environment I have really enjoyed working here even if I do not have a window. The rooms are small and I have probably never worked in this small room but it does not bother me. We just opened this office here so everything is new and tidy. – Physician 1

I do not have my own workstation. We have the office for the registrars where we have computers but the workspace is too small and we have too few computers. The office would need to be bigger and better-equipped. I do not wish to get an actual office just for myself but I hope that our common office would have more space and computers for everyone. We need the computer all the time. – Physician 3

In addition to the physical work environment, there were differences in attitudes to the organisations' management culture depending on whether the physician is working the public or private organisation. The physician who works in the private organisation said the organisation has positive values and vision which is the base for the entire organisation's performance. Furthermore, information is shared vertically within the organisation. The physicians are given a lot of responsibility and freedom, and they are also supported by the managers. Another physician, who on the other hand worked in the public organisation, mentioned that they are slightly critical towards the decision-makers. The savings have affected their performance negatively and for example they cannot anymore organise a mentoring for the young employees. She also mentioned that they get an annual survey related to an occupational health but the results of the survey are never published for the physicians. These differences are related to the organisations' performance and management in a wider sense. The immediate managers, however, were assessed as an enabler of physician's work in the previous section.

I think that the management culture is positive in this workplace. We have good values and vision and that is the basis for everything. The information is conveyed from the top down which I think is very good management. Thus, everybody knows why the certain things are done, why we are in the organisation and what are the organisation's values. This is quite a typical expert organisation so we are given a lot of responsibility and freedom and at the same the supervisor supports our work. We have regular performance reviews and that is an important thing for us. – Physician 1

We are somewhat critical towards the decision-makers of this city because it largely depends on them how the things get done here. We used to have here mentoring for younger employees. Now, we have not had it for two years because of the savings. Sometimes I cannot help thinking whether the decision-makers and politicians know at all what kind is our job here. We also have an annual survey related to an occupational health but the results are not even published here. Apparently, there were some difficulties in interpretation. – Physician 4

In conclusion, the key challenges in the physicians work are the urgent workdays, information systems, unevenly distributed working time, professional identity and work interruptions. In additions, there are a few major differences in the work conditions between the physicians working in a public and private sector that were considered positive or negative depending on the sector. The challenges affect negatively the patient work but also cause stress and workload for the physicians.

### 6.3. Lawyers

#### 6.3.1. Altruism and the emotional intelligence are the key enablers of the lawyer's knowledge work

Altruism is typical characteristics for the lawyers. The lawyers need to understand the clients' situation and indicate that they listen to their clients. The cases are often relatively intimate and they require confidentiality. On the other hand, the altruism and working with people are the factors that motivate the lawyers. In addition, the nature of the lawyer's work requires the lawyer to perform in a customer-oriented way. Altruism and confidentiality between the lawyer and the client form the key idea in the lawyer's profession and therefore understanding it helps the lawyer to perform his/her duties better.

We should have some kind of vocation for this work and the desire to help people...We deal with very personal and intimate things, such as people's financial affairs and domesticity issues. Client may be very vulnerable and feel that he/she comes to tell us one of the most important things of his/her life. We need to understand the client and stay close to him/her. The presence as a human being is important – Lawyer 2

In addition, the lawyers must possess emotional intelligence that is the certain kinds of personal characteristics. This means that there are all kinds of people with who the lawyers need to get along with. The lawyers said that they are required to give their all and at the same time consider how to act with the client. This helps considerably to approach people better. Interpersonal skills are also important in the lawyers' work and in the managerial work. One lawyer explained that the lawyer needs to speak in a vernacular manner so that the client really understands and feels that he/she is also listened. Most of the lawyers highlighted that the psychological nature of the work needs to be taken into account. Sometimes clients tell such a things which are not substantially related to the law but they must be still listened. The lawyers said that these all help to achieve satisfied clients. In addition, it increases simultaneously the lawyer's job satisfaction and motivation to work.

Sometimes the lawyer acts only as a sheet anchor for the client. The case may be so simple that it even does not necessarily require a lawyer. In many cases they, however, say that they need the support of a lawyer for example to a courtroom or a meeting. Many times I am just the client's support as a human and the case does not deal solely with the legal affairs. – Lawyer 1

Pursuing the vocation increases the lawyers' motivation. There are often different cases to handle and according to one interviewed lawyer, the cases that are close to the lawyer's passion or vocation progress the best. All the interviewed lawyers said that the

determination of the significant cases successfully motivate the lawyers the most. They said that it is always better to end up to an agreement rather than to go to the court. On the other hand, as the work is urgent, it is typical that the lawyer gets a new case straight after finishing the previous one. Thus, there is always a new problematic case waiting for the lawyer. Also, the working with the people and aiming to help them, motivates the lawyers considerably. The interviewed lawyers said that they are always required to do their best for the client and even though the situation would be poor, the lawyer still tries to find the most beneficial solution for the client. In addition, the positive feedback also motivates lawyers in their work. For example, one lawyer mentioned that he has received an excellent support in his work and the feedback toward the legal operations in his organisation has been positive.

The best motivational thing in this work is the determination of the long cases for example with the agreement. I am also motivated by the fact that I may help people with their important matters and we end up to a good result in it. The work is primarily working with people so I am motivated to get to know and meet new people. – Lawyer 2

The great amount of information in the field of law causes that the law firms or the lawyers need to concentrate on the narrower field of knowledge. Indeed, the law firms and the lawyers often specialise to a certain expertise. The interviewed lawyers said that in the small places it is more difficult or even impossible that the law firm specialises to a certain fields or law. This can be handled so that if there are more lawyers in one firm, they can specialise to different fields of expertise. Then they may serve their clients better. For example, one lawyer mentioned that in their office someone is always an expert in specific area. The lawyers may guide the client to be served for the expert within the same law firm. As the lawyer selects his/her areas of interests and specialises to it, he/she is typically more motivated to his/her work. The information acquisition and usage are also enhanced when the lawyer knows that he/she handles the information strongly. There are also the organisations in which the lawyers may not specialise to any particular area of law. Then the lawyers need to cope with an extensive amount of information. One lawyer saw this as a possibility since it offers variety of different cases and clients. Hence, the lawyer's work is versatile and provides the joy of learning.

The amount of information has affected our work so that we need to specialise to something. This place is, however, so small that we are not able to say that we are focusing on a very narrow sector. In our office, we have solved this so that someone always knows well about the certain sector. Then we may suggest and direct the client to this colleague. One lawyer cannot know everything so it is important to select the areas of interests. – Lawyer 2



We are not able to focus on the narrow field of law since this place is so small. Because of the extensive amount of information, we need to constantly manage relatively broad knowledge base. I consider this as a richness that we deal with all kinds of cases. Then the clients are also very different from each other. The work is also more diverse and I get to meet with number of different people. I myself experience the joy of learning. – Lawyer 4

Because there is so much information in the field of law, the lawyer's responsibility is to be able to combine and sum up the theoretical knowledge and apply it in practice. The legal information is theoretical by nature but it is always applied in practise. Moreover, the lawyer must be able to see the case as a comprehensive whole. Clients often explain the situation to the lawyer from their own perspective, so the lawyer needs to understand how to filter the relevant and irrelevant information apart. All the interviewed lawyers mentioned that this part of their daily job content. One lawyer told that this all is typically needed to do very quickly. Education and work experience help the lawyers to draw the overall picture of the case. These skills facilitate the lawyer's work significantly since they help the lawyer to solve the cases in a best possible way and to find the most suitable solution to the client.

In this field, I need to be able to handle the large amounts of information quickly. Different things and pieces of information must be able to be combined and summed up. Through the education and work experience I have learnt to form a broader overall picture which is essential in my work. – Lawyer 3

All the interviewed lawyers said that the physical work environment facilitates their work. It is a place where the contacts with different actors are created. Moreover, it supports the individual work. If the physical work environment is appropriate, the employee may do better the work which requires concentration. In addition, appropriate physical work environment enhances teamwork. They also mentioned that the office's location possibly enhances their work. For example, one lawyer said that it is essential that the office is centrally located in the town. Then, it is easier for the clients to approach the lawyers. In addition, the lawyer themselves may reach the other officials more conveniently.

We have a good physical work environment. Our goal is that everyone has the appropriate office or workspace. The negotiations are handled in the meeting rooms and the pair working at the assistant's workstation. – Lawyer 2

The importance of information technology has increased significantly in the lawyers work. In particular, it facilitates the communication and the information acquisition. All the interviewed lawyers said that they use the information technology for these activities. According to the interviewed lawyers, the lawyers get a lot of emails during

the day. One lawyer said that one hour is not usually enough to respond to all of them. Moreover, the lawyers said that the some of the cases are obtained through email. In addition, using the information systems, the lawyers work can be planned better. For example, one lawyer who was working in a public organisation explained they need to fill in some information to the systems because these are then used as a basis for the planning of the entire legal operation. According to the interviewed lawyers the information technology speeds up the information acquisition. Due to the information systems, the information is more readily available. The lawyers mentioned that they do not have to search for the information from various sources and locations. In addition, it was mentioned the phone is used substantially in the lawyer's work. One lawyer told the he may get even forty or fifty phone calls a day. The lawyers said that they use the phone while they are traveling from one place to another or working from home. Using the phone the information sharing accelerates and sometimes it is more convenient way to communicate than the email. Moreover, they may replace the actual face-to-face meetings to telephone conferences. One lawyer had also international projects for which the phone and Skype are the best tools to communicate with the others. He said that because of phone, email and Skype his own traveling has decreased a lot.

Information systems have increased significantly and they have become more and more important aspect in my work. They have an effect on everything. We need to fill in the certain information to the systems because it is used as a basis for planning of the work. In that sense, they really are meaningful. Sometimes the usage of information systems takes time and you may feel that there would be more important tasks. However, they facilitate so much the information acquisition. If I have a certain problem, I can search for the information and the solution. Earlier, I needed to find the solution from various sources and from different places. Therefore, I consider the information systems as a good thing. I feel that the information is always accessible and it can be found easily. Of course, there are things to which I cannot find information or it is not available. In this field, you can never have too much information. I use only the information that I actually need. – Lawyer 4

A large proportion of the lawyers' work includes administrative or routine tasks. These tasks, such as preparation of contract templates, take a relatively lot of time. That is some lawyers have a secretary who handles the routines tasks on behalf of a lawyer. In this way the lawyer's working time is released for the other tasks. Most of the lawyers mentioned that have a secretary. Two lawyers said that the secretary has an important role also in informing the client about the current phase of the case. For example, one lawyer explained if the lawyers do a team or pair work, there is always an assistant working with them. This helps to process the case comprehensive when the secretary may handle the paperwork and inform the client on behalf of the lawyers.

I have a secretary, a law student, who answers the phone, order certificates, writes templates for contracts and prepares drafts. For some special cases, the secretary may find background information for me and after that I may finish them. She works largely independently. Sometimes, I just may sign the papers which she has prepared before. As a whole, she takes the routine tasks to handle which facilitates my work. – Lawyer 1

The interviewed lawyers mentioned that the positive work environment facilitates their work. It is important that the lawyer may discuss with his/her colleagues and they share information with one another. In addition, the colleagues help to cope with the pressure and stress at work. On the other hand, all the interviewed lawyers highlighted also the importance of external network. They said that the broad network is a channel for communication, assistance and sharing information. The lawyers explained that they are particularly dealing with the lawyers acting in the same area or within the similar working context. For example, one lawyer who is working in a public organisation said that his network consists of the other lawyers who are working in a same kind of organisations. The lawyers told that their work is facilitated when they know the colleagues from who they may ask for advice in difficult situations. The questions may relate to the clients, cases or to the court matters. In addition, one lawyer said that she may also recommend her colleagues to the clients if she herself is not able handle the case. In addition, one lawyer mentioned that it is important to know the local actors because then the negotiations are more productive when the lawyer is aware of the colleague's working methods. Furthermore, it is easier to go to the court when there are familiar actors on the opposite side or in the court judgement side.

The network is good from the perspective of exchanging information. I can ask from my colleagues if I have any questions. The questions may be related to my client, the contact request I have got, or that the certain case is handled by someone who is not the lawyer. I may get the background information from my colleagues. If some cases provide relatively small monetary benefit but it is an interesting case, I may call to my colleague and ask if he/she would like to take up the case. Sometimes I can ask about the court matter from my colleagues. The importance of the network is essential particularly, when you are working alone. – Lawyer 1

Sometimes, the processing of the case may take a long time while sometimes the cases are smaller and progress quickly. Most of the interviewed lawyers said that they typically get new clients through their old clients. These old clients may have recommended the lawyer or the law firm for his/her acquaintances. Then, the new clients may already have an insight of the lawyer's methods of handle the case. This makes the work easier for both parties. Moreover, the customer may initially have a somewhat better confidence in the lawyer. The lawyers considered that this is one of the

best ways to get feedback and remain motivated to the work. In addition, one lawyer said that this reminds the lawyers to always do their best since it may have far-reaching effects.

It is obviously the best feedback toward my work that the same client asks for my help again with a new case or that I get new client to whom I have been recommended by my old client. – Lawyer 1

As a whole, the major enablers in the lawyers' work are altruism and emotional intelligence, specialisation, the ability to build the overall picture by combining information, the physical work environment, information technology and information systems, the secretaries, broad network and the new clients through the lawyer's old clients. In addition, there are various different aspects that motivated the lawyers. These enablers allow the lawyers to work for the customer's best and to develop their own competence.

### **6.3.2. The heavy workload and haste are the key challenges in the lawyer's knowledge work**

The professional ethics and the Bar association is closely connected to the lawyer's work. It is seen in the lawyer's willingness to work on behalf of right and wrong. The professional ethics controls the lawyers' behaviour not only at work but also during leisure time. Lawyers' Bar association has for example set the standards of behaviour over which the lawyers need to reflect their actions constantly. The professional ethics sets the duty of confidentiality. Thus, the lawyers are not allowed to discuss about the clients other than on the general level. One lawyer said that sometimes it is difficult especially since she is working alone and does not have anyone to talk to even generally. Moreover, the professional identity follows the lawyers in their leisure time. If the behaves inappropriately even in his/her leisure time, the lawyer may get a complaint from the Bar association.

The professional identity always follows me, also in my leisure time. Our Bar association's rules requires this. I do not really feel that I work all the time but they are the values that pass along with me. All the things that I am discussing with the client for example at the office are confidential. It is really important and must be emphasised in a small town. Confidentiality is also a little problem in this work since I cannot talk anything about my job at home. – Lawyer 1

Naturally, we do not talk anything about the clients since we have the obligation of the professional secrecy. This sets the certain framework and limits to the information sharing. We discuss about the clients and cases in general level. This is not difficult if the lawyer self is aware of the

importance of this professional obligation... The professional identity also follows me all the time. This is affected by the Bar association's guideline for the behaviour. It mentions the lawyer's values and status. Therefore our leisure time activities are also monitored in this sense. If I behave inappropriately, I may get a complaint from the Bar association – Lawyer 2

Lawyers can be considered as knowledge profession like one interviewed lawyer described. When the lawyers carry out their responsibilities and handle the clients' cases, they are based on the theoretical knowledge. A large amount of information in the field of law challenges the lawyers to update their knowledge base constantly. All the interviewed lawyers explained that the rules and regulations changes often. Therefore, the lawyers must follow and be aware of the changes. Sometimes it also takes a lot of time to find out about things and develop the knowledge-base. The lawyers highlighted that if the lawyer is not willing or able to learn and to update his/her knowledge-base, he/she cannot work in the field of law. Incorrect and old knowledge may cause mistakes and can even be harmful. Therefore, the Bar association also requires the lawyers to train themselves regularly.

This is a knowledge profession and the clients expect that we are able to help them with problems. Everything we do is based on the theoretical knowledge. We need to know about the Finnish legal system and laws. In addition, we need be capable of applying the theoretical knowledge into practice. The knowledge base is very broad and it changes all the time. We need work for remaining up to date with these changes. The know-how must be updated and the competence maintained. Otherwise the lawyer may do mistakes and he/she cannot handle his/her work. The regular trainings are organised for us. If the lawyer is a member of the Finnish Bar association, he/she has the obligation to train himself/herself. We have to have 16 hours of training per year. This is our association's requirement. – Lawyer 2

Irregular working time challenges the lawyers' work. The lawyers' workload is heavy and it also requires the lawyers to do long working days. According to the interviewed lawyers, the lawyers work long hours regularly. They also continue working at home in the evenings. One lawyer said that this is true and acknowledged fact but the problem is that the work done at home are not considered as work and therefore they cannot take that time from the rest of their working time. In addition, some of the interviewed lawyers explained that they need to work during their holidays. The lawyers work during their leisure time but they may seldom decide to do a shorter day or take a day off. One lawyer said that she comes to the office earlier than the others so that she may concentrate on her work in peace. She also mentioned that the amount of work forces her to come often back to the office at the evening. She said it is better to come back to

the office since working from home would blur the border between work and leisure time. The lawyers also said that because of the heavy workload the lawyers need to give their absolute best and stretch to their limit. Then the working times are impossible to maintain. One lawyer mentioned that the long working hours and heavy workload get the lawyers close to the burnout.

The lawyers are required to work longer hours. The work is also increasingly moving to done at home. I could not work just from eight till four. Even though I work a lot at the evenings, I cannot take those hours away from my working time. It is an evident problem. It is not considered as working time that I would work during my own leisure time. Sometimes I even have to work during the holidays. – Lawyer 3

As a negative issue, I consider the fact that the workload is too heavy and more and more cases are coming all the time. When I have a lot work, I really need to stretch to my limit. The fair amount of work is just a wish. Sometimes the lawyer is close to burnout. – Lawyer 4

Some lawyers work longer hours at the office while the others continue working at their home. Moreover, the interviewed lawyers mentioned that they must also work on weekends and holidays. Some of the interviewed lawyers said that they especially make the phone calls and go through their emails even though they would not be at the office. The lawyers stated that they cannot fully separate their work and leisure time.

I try to compensate the long working days with proper holidays. However, last summer I answered every day to the phone calls and emails. I cannot separate the work and the leisure time. I handle the business calls on the way home in my car. The work matters are in my mind all the time. – Lawyer 2

For the lawyers it is typical that the course of the work day changes rapidly. It is difficult to plan the next work day beforehand since one phone call may change the rest of the day significantly. This means that the lawyer needs to do the tasks later, for example, at home or then he/she may delegate the tasks to someone else. Some tasks may also bypass other tasks in importance and hence the other tasks may get the lawyer's lower attention. The lawyers' work, therefore, requires a lot of flexibility since their work including schedules, tasks and deadlines change often.

This Monday I had an unexpected session day at court. Thus, the schedule of the next working day changed completely...Because of the haste and unexpected sessions in court, I need to delegate my tasks for the assistants. This happens relatively often. I don't have normal or typical working day. Even though I would check my calendar at the evening, then after the day it had not gone according to the calendar. One phone call may change the

course of the day entirely. At times, I get the tasks and assignments which bypass the other tasks in importance. – Lawyer 2

The main challenges in the lawyers work are haste, pressure and stress. The difficult and intimate cases and the client's situations increase the lawyers' mental workload. Even though the lawyer's work is not physically demanding, it is demanding mentally. The things handled at work eat the lawyer's resources and affect stress. The lawyers said that the work experience help them to handle the hard cases more comprehensively. They learn to take it better and externalise themselves from the personality of the case. Most of the lawyers said that at the beginning of their career they had difficulties with these. They handled the cases as if the cases were their own personal issues. The lawyers said that they often considered these cases at their home could not get rid of them easily. Hence, they had difficulties in the separation of work and leisure time. They also explained there are situations for which the lawyer cannot affect and they need to learn to accept it. Therefore, the certain attitude helps the lawyers to perform their job but they have needed to learn it through work experience. At the beginning of the career, the lawyer's work is mentally very demanding.

We handle quite intimate and hard issues in this work. I think that the work experience helps to handle and to cope with them. I remember that at the beginning of my career I thought my clients' matter much more, also at home. Now, when I have done this for years, I can separate the work and leisure time. However, I cannot help thinking the clients' destinies. I just cannot become so cold that I would not consider them. The cases do not bother me anymore so that I would consider them constantly at home like they did in my early career. I need to also accept the things for which I just cannot do anything. Even though I would have the desire to help people, sometimes I cannot do more. – Lawyer 4

Lawyers are in a constant haste in their work. The clients' standards increases all the time and they assume that the lawyers solve their matter quicker. According to the interviewed lawyers, the delay in the issues and the unfinished affairs cause stress. The haste in the lawyers' work causes the delay for some tasks and because of the parallel tasks some tasks get the lawyer's lower attention. The workload forces the lawyers to work longer hours and work at the evenings. In addition, the urgency has a significant impact on the quality of the lawyers' work. All the interviewed lawyers mentioned this as their major challenge in their work. They all said that they would like to always exert more effort on the cases but they do not have time for it. It causes a feeling of inadequacy for the lawyers. For example, one lawyer explained that she used to go through the court session in her mind before the actual court session. This helped her to take different things better into account and to be more confidential and prepared in the

court. She mentioned that this is not possible anymore because of the parallel tasks and haste at work. Therefore, she feels that goes to the court unprepared.

The delay on the matters and the unfinished tasks cause stress. The haste at work has an effect on the delay and that the some tasks get my lower attention. During the court days I cannot do anything else than sit next to the client. Then I must catch up the schedule and do the unfinished work at the evening. – Lawyer 2

The lawyer's work is largely regulated by the specific and strict deadlines. Even though the lawyer's work would be autonomous the deadlines must to be followed precisely. They typically affect stress for the lawyers but on the other hand they frame the lawyer's working day and bring concrete results. It is typical that straight before the deadline the lawyers work long hours.

I can fill my calendar by myself but the major deadlines must be followed strictly. These deadlines cause stress at work but on the other hand they bring the concrete results, which I like. – Lawyer 3

We have a lot of deadlines by which the things need to be finished. They control my work considerably. When the deadline is coming up, the work must be completed. It sets the framework for the working day. In this case, I can never say to my client that I did not have time finish the task. – Lawyer 2

The major challenges in lawyers' work are related the professional identity and the control of Bar association, extensive amount of information in the field and the irregularity at the work. Additionally, mentally heavy work in early career, haste at work, strict deadlines, long working hours and the separation of the work and leisure time challenges the lawyers' work significantly. Particularly, these challenges affect stress and pressure for the lawyers but they also interfere with processing the cases.

## **6.4. Pastors**

### **6.4.1. The ability to be with other people is the main enabler of the pastor's knowledge work**

According to the interviewed pastors, the professional ethics do not set boundaries to the pastors' work. For example, the Church is relatively liberal towards the content of the religious services. However, congregation may set certain boundaries to the pastors' work. This is due to the people's attitudes and expectations towards the pastor's work. In addition to the professional ethics, the Church code directs somewhat the pastor's work. It says what the priests should do. However, the priest may freely decide how the work is done.



The Church did not set too strict boundaries for our work. In fact, I am quite conservative in terms of the content of the ceremonies but the implementation can be liberal. The professional ethics did not set the boundaries for me but some people may have thought that their sanctity was invaded. Hence, the boundaries were set by the parishioners. The Church, in fact, is very liberal and tolerant. – Pastor 1

The Church determines what the employee must do. There are guidelines about the employees' tasks but the employee must come up with the content of the work. As a vicar this is simple since the Church code determines what I need to do. The way I do it, I need to think about. – Pastor 4

The pastor's work requires often concentration and individual preparation. This work is somewhat facilitated if the pastor may carry out the tasks anytime regardless of the working hours. The possibility work from home at any time is a positive thing which enhances the pastors' work. Some pastors may carry out their tasks whenever they feel the most productive. According to the interviewed pastors, pastors often do the preparation work at home. For example, they may write the speeches at home. One pastor said that the parish's work facilities are not suitable for activities that require concentration. Therefore, the employees do not have a compulsory attendance requirement in the office but they may do their work elsewhere if they wish.

Sometimes I can work from home. For example, I might write speeches at home with my computer. I do not necessarily have an inspiration during the daily working hours so I may then write a speech at the evening or in the weekend. The time used for the preparation work I am able to reduce from the office working time. – Pastor 2

Some of my work I can do from home. Most of the clergy prepare for example the speeches at home. Here, they cannot be done unless the office is not solitary enough. Moreover, the parish's calendar is online so the bookings can be done at home. Typically, the preparation work is done at home. The parish's employees do not have a compulsory attendance requirement in the office. Hence, the employees may do their work at home instead of hanging around in the office. Most of the pastors do so. – Pastor 4

The vicar's work includes both administrative management and leadership. In the interview the vicars assessed their leadership skills in many ways. One vicar considered it important that other employees feel it easy to approach him and that he is flexible for the employees. The vicar often represents other employees for example at the meetings. Hence, it is necessary that the vicar will pursue the employees' interests at the meetings. In addition, the vicar attempts to meet other employees informally and delegate the

tasks for the others who have the best expertise to carry them out. The other vicar mentioned that in that field the supervisor do not say to the employees what he/she should do during the day. The employees may determine the content of their work by themselves. All the interviewed pastors mentioned that they have a flexibility and autonomy in their work. One pastor mentioned that he, in turn, had two poor supervisors. One supervisor was controlling and rejected new ideas. Other supervisor, in turn, escaped from taking responsibility over the matters. This kind of matter may often have a negative impact on the employees' motivation. For example the Pastor 1 explained that he became frustrated. On the other hand, he learnt a lot about how the supervisor should not be. Afterwards, the interviewed pastor could utilise this knowledge when he was in supervisor's role. This pastor realised that especially for the young employees should be given tasks which they are interested. Non-motivated employees may otherwise change the workplace. On the whole, the leadership was seen as a positive and a negative aspect on the work.

I believe that I am easy to approach. I am quite flexible for the workers, for example, in terms of the days off and holidays. I try to pay attention to the employees' perspective and think about their benefits. I try to be an advocate of the other employees at the meetings. If we have coffee brakes during the day, I try to take part in them and meet other employees. Normally, I also have my office door open so that the employees know that I am here. I delegate my tasks to the others. I give responsibility to the others and I advise them to carry out certain tasks with their skills and know-how for example in the teams. It is important to utilise effectively all the expertise and know-how that we have here. – Pastor 3

I frustrated in a youth work. The supervisor had a major impact on this. Even though I was some kind of a developer person by nature, I was paralysed in my work and I just did what was absolutely necessary to carry out. I did not feel that I got appreciation. However, I adopted from my bad supervisor what the supervisor should not do. Leadership is partially coaching and you need to check what the young employees want to do and direct them to do the tasks from which they are keen to. If you put them to do something that they do like to, they may leave quickly since young employees are typically not as committed to their work. When you give the employees tasks of which they are keen to, it contributes to the atmosphere and work progress better. – Pastor 1

In the interviews all the pastors stressed the importance of the communication skills in their work. The pastor performs often publicly and hence he/she needs to have an ability to talk and communicate with people. One pastor mentioned that the pastor must be accurate of what he/she speaks and how he/she speaks. The pastors also told in the interviews that they need be able to meet people and identify with them. In addition, it is

important that the pastor is interested in people and is willing to get to know with them. On the other hand, one pastor mentioned that it is as important to be silent in a right situation.

Communication skills play an absolute role in this work. Almost everyone has an impression that the pastor only preaches but we really need to be accurate about what and how we speak. In general, agreeing, talking and negotiating with the people must be handled in this work. It is all the same, how well you understand the Bible. If you are unable to communicate with people, you cannot work in this field. It is also important that the pastor is able to be silent in right situation. Often young pastor or a candidate may think that it is enough that knows everything that have taught. However, communication skills and attitude are important aspects in this work. – Pastor 2

Pastors work typically close to people and they also may carry the people's issues with them. The pastor's work is, thus, mentally demanding. According to the interviewed pastors, they were better able to handle the heavy workload when they realised that the people's issues are not their own. The pastor may listen to them and try to help them but the problems should not become their own problems. In addition, some pastors talk with their colleagues and exchange their feelings. One pastor mentioned that if the pastor is mentally health it is easier to move on to the next situations. It is possible for the pastors to adapt better to the situations through the work experience. For example, after the funerals it is possible to move more quickly to the next tasks.

I can handle my work because I know that people's problems are not my problem. I have learned to understand it in a hard way. If people have concerns they are not mine. I can listen to people and try to help them but I must not make their problems my own. You need to be empathetic but not too much. I have learned to understand that certain things happen. It helps a lot that I have a work pair with whom I can discuss and exchange feelings. Naturally, we cannot talk about people's things since our work is confidential. To some extent the faith helps also me to carry this work. People are able to adapt to the situations. When the pastor gives the first religious service, for example a funeral, the heart rate is quite high. Then, the pastor may think whether he/she is acting correctly in the situation but over the time he/she adapts to the similar events. – Pastor 2

The pastor work is facilitated the fact that they understand the connection between the professional identity and personality. According to the interviewed pastor, it is very important in their work. The professional identity and own personality go together and the priesthood is not just applied if necessary. If this connection is not understood, it is, according to the interviewed pastors, difficult to work as a pastor. One pastor said that

there are many roles on one on the other and they are difficult to separate since they all are part of the pastor.

I have learned to treat myself better and become more familiar with my identity. In this work, my personality is always with me. The pastor's work is not only a role. I am a pastor but at the same time I am me myself. If you are pastor but you forget your personality, it is difficult to do this job. Or if you are just yourself but you are not a pastor, it does not work either. Then you do not do what you are supposed to do. I can handle my work and personality but not everyone can do this and it is their problem. – Pastor 2

I am an even person and I do not have strong and turbulent feelings. In this work, the pastor's role is accepted and it will remain on. Later in life, the role and personality are united together. As a young pastor, the pastor's role may turn on when the pastor puts the suit on. In life there are many roles one on the other. The roles are difficult to separate because they all are part of me. – Pastor 4.

The wellbeing at work is an important issue among the religious profession. As the pastors are constantly dealing with the important themes in human life, they may face the situations and people that may bother them for a long time. All the interviewed pastors explained that the ability to separate the work and leisure time and the ability to move forward are essential skills in their work. Most of the interviewed pastors mentioned that they need leisure time activities and a good physical health in order to handle the workload better. Getting enough sleep, walking, music and hobbies were mentioned as the elements which help the pastors to cope with the heavy work. They said also that hard situations can be regarded better through the work experience but the leisure time activities help the pastors to get quickly rid of and forget the hard situations at work.

I have a good physical health to do this job. I feel healthy and strong which has helped me in this work. I need a lot of sleep. I go often to a walk. I think that regular and healthy living is the key aspect and that help the pastors to get through the different situations at work. Leisure time activities are also important. – Pastor 3

Through the work experience it is important to get certain immunity to the work and the attitude. The hard situations always touch me but they do not break me down. Music is also one way that I use to forget the hard situations at work. – Pastor 2

In importance of information systems has also increased in the pastors' work. According to the interviewed pastors, the pastors use relatively much a computer at work. For example, the speeches are often written with the computer. Moreover, it is a

tool to share information and communicate with the others. One pastor who was responsible of the youth and student work spent a lot of his working time with the IT. He said that the nature of his work required him to be the pioneer with the IT. He needed to understand and use different technologies and tools as well as being updated with the changes and developments among the IT. He mentioned that people often contacted him through the Internet. In addition, the other pastor who worked in the congregation explained that that social media, such as Facebook, have become an important tool for the Church. The Church encourages the pastors to be actively involved in the social media communities. He also said that the parishes are taking the centralised member data system into use. This facilitates the parishes' work in general since the information is available in one place. Therefore, the information technology facilitates the pastor's personal work and the communication with the colleagues and the parishioners.

While I was involved in the student work, the social media stepped into the scene and it became more and more important. The possibilities to interact and communicate increased. Internet became an important tool for us. We achieved the large proportion of the students via the Internet. In addition, we informed the students about the different events through Internet. We tried to always use the newest tools and hence, we needed to remain involved in the technology developments. We were often the first who took the systems and methods into the usage. IT, systems and applications as well as the social media were the requirements in our work. – Pastor 1

People approach me often through electronic communication tools, such as via email. Facebook is another important tool through which the people contact me. The Church has trained its employees to this kind of media work. Currently, the Church recommends the Facebook and/or Twitter profile for everyone and that the employees really are involved and take part in the conversation. Nowadays, people contact us more through Facebook or email to ask questions that occupies their mind and discuss the social issues. –Pastor 4

The pastors mentioned in the interviews the key motivators in their work are the content of their work and other colleagues. All the pastors felt important that they could help other people and work in a comfortable work environment with the reliable colleagues. In addition, one pastor told that the independence of the work was essential for him to remain motivated. He also explained that helping people is a challenge in a positive sense and that keeps him motivated. Another pastor stressed the importance of the working atmosphere. The older and more experienced workers acted as mentors who shared important information and methods for him. The colleagues act as the important motivators for the pastors since the monetary carrots are not used in their field. One pastor said that well succeeded speech, the positive feedback and the people who attend

the service motivate him. He explained also that he appreciates the feedback and discussion with the colleagues. The fourth pastor mentioned that he is motivated since he may perform his vocation. Moreover, he explained that he is working in a place where the Church is appreciated.

The versatility of the work is what I like. In addition, independence is important. I am responsible for the planning and conducting of the work. In the parish work someone else would add the services to my calendar. It is of course important that I am somehow able to help people with their problems. Sometimes taking care of people is difficult and I cannot be sure if the person became more distressed. But I get some kind of prize from helping people and getting work done. It is always challenging to talk with people and trying to help them as I do not have any ready recipes for them. However, I consider this as a positive challenge, not negative. The responsibility of work is a challenge in a positive sense. – Pastor 3

The student work team motivated me a lot since the group was so good. Then, I also had couple of really good fellow workers. I did not necessarily see them often but they were a sort of mentors for me. It was comfortable to work with them. Good colleagues were the key elements which helped me to cope with the work since the monetary carrots are not widely used in our field. – Pastor 1

I am glad if there are many people attending the worship. I am also pleased if I personally feel succeeded in giving the speech or a service. In addition, the positive feedback motivates me. Especially, the feedback received from the colleagues is important. It is also enjoyable to hear positive feedback if some event has gone well. – Pastor 3

In this work I am motivated since I may pursue my own vocation. The work environment is also convenient and colleagues nice. In addition, I am working in countryside and here the Church is appreciated. – Pastor 4

It is evident that the routines facilitate the employees work. This makes the work more efficient and the working time may be used more usefully. According to the interviewed pastors, through the work experience the pastors have got routines that facilitate their work. For example, one pastor mentioned that the certain routine tasks are repeated for him at regular intervals. They standardise his work. All the pastors explained that the pastor's basic work, such giving services, typically goes well. The work experience affects this. Another interviewed pastor told that he does not need to use so much time anymore for preparing the speeches. Thus, the working time is released for other purposes. In addition to the routines, the work experience enhances also other aspects of the pastors' work. The pastors said that through the work experience the interpersonal

skills and the ability to approach people evolve a lot. For example, one pastor explained that the presence is much more important than the book learning.

The pastor's basic work goes well in my opinion. This is influenced by the long work experience. I feel comfortable while carrying out the pastor's tasks. The work may not, however, be too routine-like. It does not make sense to give the same speeches for ten years. In this work, the pastor needs to develop. I can quickly become acquainted with people and get close to them. I want to reserve a lot of time for the people when I meet them. Even if I meet the people out, it is easy to talk with them. It is important to be able to talk just about the common, everyday issues. – Pastor 3

Through the work experience, the presentation skills and the ability to give the speech have developed the most. I am able to keep the funerals, christening and the services with minimal preparation time. I can be ecological. I do not use the entire day for preparing a ten-minute speech. For the young pastors this may be difficult. For example, they may just plan a funeral and the energy goes into thinking about how he/she should be in that situation. This is the routine that comes with the work experience. The ability to be present is more important than reading a book. – Pastor 4

The key enablers in the pastors' work are related to the fact that the professional ethics do not set strict boundaries, working from home is possible, fluent interpersonal skills and that the pastor may become immune from the people's issues. Moreover, the professional identity and own personality, separation of work and leisure time, the possibilities of IT, motivation, routine work and work experience are also the major enablers of the pastors' work. The enablers particularly help the pastors to act with people. Moreover, they support the pastors to cope with their heavy work load.

#### **6.4.2. Financial matters and irregular work are significant challenges the pastor's knowledge work**

One major challenge that affects the pastors' work especially in the parishes is the financial matters. The parish pastors emphasised the financial challenge in the interviews while the pastors who work elsewhere did not discuss about this problem. One pastor mentioned that the financial issues cannot be predicted far into the future and hence, they set question marks on many issues relating to the work among the congregation. For example, the parishes own typically lots of properties which they are pressured to give up. Moreover, in the future the parishes must cope with a smaller set of employees. The parish pastors mentioned that this underlines the need for the volunteers. The Church's basic tasks and duties are invested and they are now built more upon the volunteers. However, the staff cutbacks will increase the workload in the

parishes. The poor financial situation has also a negative impact on the work atmosphere. It is difficult to find and maintain a positive climate in the parishes when the resources are reduced. Furthermore, one pastor mentioned that the withdrawing from the church also affects the economy of the parishes.

In this work it is challenging that the financial matters cannot be predicted very far ahead. Although we have made the property strategies, we should still give them up. The question marks are strongly related to the economy and these affect the work in the parishes. In this congregation, relatively many are still the member of the Church. However, when thinking about this congregation, it is a fact that in the future we have to survive with a smaller set of employees. This highlights the need for the volunteers. This is a common challenge to the congregations. It also needs to be taken into account how this matter is transmitted to the parishioners. In the future, all the things cannot continue as they are and then we must think whether the certain duty belongs to the parish. The staff cutbacks increase my workload. I need to take care that the cutbacks do not increase the workload of other employees. – Pastor 3

In the pastor's work, the working times can be relatively irregular for some pastors while for someone the working times may be regular depending on the organisation in which the pastor is working. According to the interviewed pastors, the parish pastor's do not have the actual working time. They have also been prescribed two days off but they may take place on weekdays. The pastors work often in the evenings and weekends because the events, ceremonies and meetings are held then. In addition, some pastors mentioned that because of the high workload, they have to work at the evenings after the actual workday. The pastors mentioned that they are free to fill their calendars and decide the content of their work. This motivates the interviewed pastors. On the other hand, the long working hours cause a frustration. Because of travelling at work, one pastor told that sometimes he had from 12 to 16 hours long working days. One pastor, that has now regular working hours, explained that it suits for him. Otherwise, he would have an even greater sense of inadequacy which is typical work the pastors. The vicars also told in the interviews that they have to often reschedule or cancel their holidays. This is because of their responsibility to attend certain meetings and events. Pastors are often asked to attend various religious events. All the interviewed pastors said that it is difficult to refuse from the people's personal requests. This causes the longer working days and cancellations for the holidays.

When I was in a supervisor role I got freedom to fill my calendar. As I got this possibility to decide about my work, it made my job more meaningful. I also got chance to develop the work to such a direction I wanted and spend time where I wanted. For example, the parish pastors may have pre-filled calendars and they often do just the essentials but fortunately there are enthusiastic persons who



participate also in many other events. The reason why I travelled so much in my work was, however, the fact that I wanted to contribute to the youth and student actions in Finland. Occasionally, the days were quite long while sometimes I had shorter days. I also had the working days when the 12 hours was not enough and they were able to stretch to 16-hour days. – Pastor 1

In principle, I have a normal weekday working time which differs from the traditional parish pastors' work. They do not have regular working time but I have. My work is basically from 8 o'clock till 4 pm but sometimes of course the schedules change. I can take the day off from the work if I have got the hours filled. For me, this regular working time is suitable and actually I would not understand the non-working time that the parish pastors have. If I would not have a regular working time, I would have an even greater sense of inadequacy. In pastor's work there is always a feeling of inadequacy. – Pastor 2

The pastors do not have a working time. We are not under the regular working hours. We have also been prescribed two days off but they may take place on weekdays. This work can be done one hour or then the entire day. I probably have here more work to do like everyone in managerial positions has. I may regulate the amount of work and the duration of the workday. Personally, I keep two days off from the work but sometimes I am obligated to come to work if there is something that requires my attendance. The pastor's work is often at the evening because people are more reachable and they are able to participate in the meetings. – Pastor 4

According to the interviewed pastors, the pastors may get feedback on their work from several different sources. Often the feedback obtained from the parishioners is positive. One interviewed pastor told that the bad feedback is usually a criticism towards the Church and not to the pastor. At the beginning of the career, the pastors may think of the negative feedback more than now. Another pastor however explained that too exceptional may hurt the parishioners and cause the negative feedback. Hence, the pastor may learn to protect himself/herself and act so that the negative feedback will not be obtained. This affects significantly to the work motivation. One pastor also said that it is difficult to get the feedback from the work. The pastors must learn to read the feedback from the people's face.

The work in this field is hard because we are so close to people and the issues are so sacred and intimate. Too exceptional may hurt the parishioners and cause the negative feedback. Within the workplace, some colleagues are reluctant to make changes and develop the performance. In order to avoid the negative feedback and reaction, it is sometimes easier to be quiet so that I do not have to listen to the complaints. For the negative feedback, it is possible get protected

and develop own actions to the form that the negative feedback will not be obtained. – Pastor 1

Possible negative feedback is not personal but they are rather directed to the Church. I just represent the Church so they will not concern me unless I have done something wrong. Failures happen but they should not be left to bother you. At the beginning of the career I used to think of the feedback more than today. – Pastor 4

Sometimes I hear from the people or read from their faces that something has gone well. For example, in productive work it is possible to get a clear feedback from the work done, but in this work nothing concrete is produced. I may give a speech to 6000 people I do not have an idea how my speech affected the people...It would be good to get more constructive feedback. I would like to know whether my speeches affected somewhat the people. The grade is difficult to get in this work and it is not worth trying to achieve. – Pastor 2

The education helps the knowledge workers to get into the work life as it gives the theoretical basis for performing the work. However, three of the interviewed pastors mentioned the theological education in Helsinki is poor. They told that the theological faculty in Helsinki itself is aware of this problem. The education was said to be too theoretical and does not have a link to the practise. In addition, they said that the theological faculty has the significant impact on the fact that the Church's position has weakened in society. Therefore, the Church takes the responsibility of the practical training and educates the pastors after their university education. The pastors explained that they have learned to work through the practise. In addition, one pastor told that in his workplace, the mentoring works well and the more experienced employees train the new workers. Another pastor said also that the work experience in other fields helps to perform in pastor's work since the work is about acting with different people. One pastor, however, underlined that the university is not intended to be a vocational school. The purpose of the university education is to teach the students to think.

I have said to some bishops that faculty of theology in Helsinki is probably the worst educational institution in Finland. I do not know if it would help if the education was provided by the Church or if the Church could even affect it. The faculty of theology is under state control. Hence, the faculty and its employees are not interested in the students' employment. As the Church is going downhill now, there is the fundamental culprit. The theological faculty does not educate the students as it should. Almost all the information that I needed in my work came through the work experience. Then, there were a lot of good and experienced workers who provided mentoring assistance for us. We also had

different seminars were the older workers shared their own experiences. – Pastor 1

I think that the theological education is pretty good. In my view the university education does not itself imply anything yet. In retrospect, I do not have the reason to criticise the education. The university is not a vocational school but it rather teaches to think. The work is what teaches and in this work you will never become done. We get a certain basis but it develops through work. Post-graduate trainings provide also the informational as well attitudinal teaching. – Pastor 2

In conclusion, the financial matters, the irregularity of working times, obtaining feedback and the poor education challenges the pastors' work the most. Most of these aspects cause stress and heavy workload to the pastors. In addition, they may impair the atmosphere at the workplace.

## **6.5. Conductors**

### **6.5.1. Time management and careful self-preparation are the key enablers of the conductor's knowledge work**

According to the interviewed conductors, the major part of the conductors' work is time management. The time management can include short-term planning such as planning the accurate schedule for the rehearsal period. After each rehearsal, the conductor reflects the rehearsal and assesses whether the time management was appropriate. On the other hand, the time management may be related to a long-term planning. Some of the conductors do a lot of administrative work and take part in the organisation of the concert season and its repertory. Therefore, the time management has a significant impact on the conductor's work as an enabler. The time management does not only affect the conductor's own work but also the orchestra's operation. It has a significant impact on the effectiveness of the rehearsals.

The time management is an important and substantial part of the conductor's work. The professional orchestra's rehearsals start and end at a certain time and in between are the breaks. It is important to understand the net time of one rehearsal day which can be used for playing music. This net time needs to be used effectively. One has to know how much time can be used for the certain matter. These things must be made clear, above all, for oneself. – Conductor 1

The core of the conductors' work is artistic work with music. However, they need to take a stand on the administrative matters to some extent. Some conductors do a lot more administrative work than the others. The more time the conductor is required to use for the administrative issues the less time will be left for the artistic work. For some

conductors the amount of the administrative work was as much as a half of the total working time. The interviewed conductors explained that the good backup team and intendants in the orchestra enable the conductor's work. Then, the conductor may focus better on the creative work. The conductors may also delegate some routine tasks for the other but this requires trust. One conductor has also his own agents as well as personal assistant who are responsible to a large extent of the administrative tasks. They, for example, answer to the questions behalf of the conductor. Indeed, agents may support and contribute to the conductors' international career considerably. The Finnish conductors and the Sibelius Academy's conductor education are highly valued internationally and this affects the agents' interest in the Finnish conductors.

The proportion of the administrative work is much higher than I would like to have. Occasionally, it may even be as much as 50 or 60 per cent of my total working time. There are also periods when I can just do the artistic work. I can, however, affect the amount of the administrative work. This involves delegation. Then I have to trust the others. – Conductor 1

As for the routine work, I can only speak for myself and not behalf of the entire profession since we are in really different situations in this respect. For example, some conductors want to respond to all the emails by themselves. We receive a lot of emails since are doing so many things at the same time. Some conductors, on the other hand, have solved this so that the agent is responsible for answering to the emails. In this case, most of the emails will go directly to the agent. If relationship between the agent and the conductor is good, the agent can respond to these emails directly. This has been attempted to make it as easy for me as possible so my time is released to the artistic work. I take care of only the personal matters. I try to do so that all the routine tasks that are related to the work are taken care of by someone else. – Conductor 2

Communication is part of conductors' work. They need to be able to share information verbally and non-verbally to the orchestra. The conductors emphasise in the interviews that the orchestration is about information sharing and it needs to be as clear and understandable. Moreover, they are often in touch with different actors such as with the composer, other conductors and administrative people. The conductors said that the good interpersonal relations motivate their work significantly. In addition, one purpose of the communication and collaboration is to engage the musicians to the work and to achieve the objectives. The communication and information sharing set somewhat collaborative aspect on the conductor's work even though their work is often done in solitude.

Communication skills play a significant role in my work. It is actually one of the most important characteristics of the conductor's work. I need these skills, for example, in the repertory meetings held with the musicians. The communication with the closest fellow workers (assistants, principals and concertmasters) needs to be fluent, clear and transparent. Furthermore, the interaction with the entire orchestra is essentially important. Whether it is a spoken or non-verbal communication, it must be clear and understandable. The goal is to get the people to commit. In addition, as an artistic director I communicate with different interest groups. Interaction enables significantly my work...A good interpersonal relations are a positive thing and help me to cope with this work. I feel that the majority of the interpersonal relations in my work are good and efficient whether they are the interpersonal relations with the musicians or with the other interest groups. – Conductor 1

A large network evolves for the conductors during their career. It acts as an important enabler of their work. All the conductors mentioned in the interviews that they often contact their colleagues and transmit information with one another. Conductors may, for example, discuss about the musical matters, compositions and recordings. Moreover, they may exchange opinions and experiences about the presentation of the certain composition. One conductor said that he asks the colleagues about the new orchestra and its musicians when he makes a guest appearance in a foreign country. In addition, the majority of the conductors' job offers come through his/her network and contacts. In this respect, networking enables the conductor's work significantly.

If I am going to do a guest appearance in abroad I usually contact other conductors who have previously visited there. I find out and acquire information about the orchestra, the musicians and the working conditions. However, I myself must form the opinion of the orchestra. – Conductor 2

Finland is a small country so that everything happens through the network and contacts. So in principle we should know everyone. When you know the other people the things are moving forward more easily...When I was younger, I did not understand and value the creation of the contacts. Now I know that it is important. Contacts entail the peer support and I can always ask them for advice. I get the job opportunities through these contacts so that someone knows me and can recommend me for the job. I have also contacts in abroad and thus many overseas concert tours have been realised. Therefore, things are easier considerably when I the people from this field. I get help from them but I also like to help the others. – Conductor 4

One factor that affects somewhat the conductor's work is charisma. Each conductor mentioned in the interviews that the charisma as an important characteristic enabling their work in practice. Typically, the audience perceives the conductor's charisma. Hence, the conductor's charisma has an impact on the attractiveness of the conductor and the entire concert. The people may attend the concert because of the conductor's attractive charisma. Charisma also grows with the years. Moreover, it gives the conductor respect among the musicians and the audience. Even though the musicians do not like or understand the conductor, they may still follow and appreciate him/her. The charisma facilitates the conductor to convey his/her musical vision and intentions to the orchestra.

Charisma is also important in this work but it is typically perceived by the audience. The charisma must be provided available for the entire community. In this work, the charisma is needed in front of the orchestra. The musicians follow and respect you even though they would not necessarily like you. Likewise, the audience takes my being somewhat seriously... The charisma is an innate matter and it cannot just be achieved. On the other hand, with the expertise of an iron the conductor may replace the lack of charisma but it may be that the audience is not interested in you. The charisma also grows or strengthens with age if the conductor has it. – Conductor 2

The motivation enables evidently the conductor's work. There are various things that affect the conductor's motivation. The motivation may be associated to the personal relationship at work and thus, the positive and open organisational climate motivates the conductor in his/her work. The nature of the conductor's work and the music itself motivate the conductors. The conductors' work is characterised the fact that the childhood hobby has become their job. Their work is framed by the rehearsals and concerts and completing these motivate also the conductors. The conductors do often guest appearances in the new orchestras and it was mentioned as a motivational aspect of the work. One conductor did not consider the guest appearances as an extra work but merely as a diversifier and a motivational aspect of their work. Moreover, the constructive feedback, whether positive or negative, may motivate the conductor's work. It enables to get things done better in a right direction.

The good thing is that I can make a living by working with the music. This is a cliché but true. – Conductor 1

This work is a really exquisite work. There has always been written great music and we may enjoy only a fraction of it. Music is what keeps me motivated. Also the desire to perform is what motivates me... In this work the conductor develops by doing. The work is facilitated the desire for the

self-improvement. It also brings the motivation to do the job. The conductors are at their best approximately in the age of 60 or 70. – Conductor 3

This work is largely done for the concerts. Sometimes it is even great to be in such concert which has had a hard rehearsal period. I get so much energy from the concerts so that I feel up to begin the next period. – Conductor 2

The guest appearances are essential part of the conductor's work and they bring a positive change to the work. It is nice to meet new musicians whether they are professionals or amateurs. It is interesting to see how things will be completed on schedule with the group of new people. I do not do this in the name of an extra work but rather diversifying my profession and increasing the motivation to work. – Conductor 1

Through the work experience the conductor gets a routine to perform the work. The routine is showed in a way that many of the previously mentioned issues are facilitated even more. For example, through the work experience the conductor may be better at the time management in terms of generating more workable rehearsal schedule and allocating enough time for different aspects. The work experience and routines help the conductor to communicate and collaborate more fluently with the orchestra and different actors. Moreover, the work experience entails significantly self-assurance and confidence. Hence, the stress and pressure for the work may decrease. It also helps the conductor to better react to the possible criticism in the media. The work routine and experience improve the personal preparation for the rehearsal period. The familiar scores are not needed to be studied so intensively as the completely new compositions so the conductor does not need to spend so much time for the preparation. Careful and effective preparation helps to internalise the music better and to understand what issues need special attention in the rehearsals. Once this preparation has been done comprehensively it is easier and less time consuming to recall. Through the work experience the conductors generate an extensive network that evidently facilitates their work in practice. In addition, the different orchestras, soloist and the compositions become more familiar.

My work is best enabled the increase in my own experience. The more you have seen the situations and more you can prepare yourself for coming problem situations, the better you are able to solve the matters. The increase in the experience makes constantly the things easier...The work experience helps also so that the longer you have been working in a field the better you know the different orchestras...Even though there is a lot of music that I know and I have done before, I need to take a time to a

careful preparation. With the familiar compositions the preparation does not take two months anymore and not necessarily a week. Sometimes I can bring out the score on the previous day and recall how it was. – Conductor 2

The human resources management is also an important aspect in my work. It was not taught at the university and I probably would not have understood how important it is in this work. As a student I thought that the conductor just leads great music but in practice the work includes also other aspects. I have always been social but I may have learnt how to read people better. Earlier, it was really important to me that I was popular. It was difficult to accept that some people just did not like what I did. However, there are always these people. – Conductor 3

Finally, the time management, intendants and agents, broad network and connections, charisma, motivation as well as work experience and routines are the key enablers of the conductors' work. These elements help the conductor to carry out the rehearsal period from the beginning to the end and to convey the composer's intentions to the orchestra. In addition, they allow the conductors to get job offerings.

### **6.5.2. Irregularity challenges the conductor's knowledge work**

The conductors felt the assessment differently. It is natural that the conductor and his/her work are always evaluated by the orchestra, the audience and also the media. The conductors did not feel nervous or stressed to go in front of the orchestra to lead the compositions. They mentioned that this is already learnt through the education and it develops along with the work experience. One conductor said that she considers the evaluation as positive issue which improves the rehearsals. The audience and the media, on the other hand, are the factors that may affect stress for the conductors. The possible criticism presented in the media may affect the conductors' work for a relatively long time and it may be difficult to learn to deal with. Moreover, the more influential people are in the audience the more pressure they feel about the performance.

The audience and the concert situation entail a certain pressure. It makes no difference how many people are in the audience because the concert has to always succeed. If the concert is noted, such as a premiere or the soloist is eminent, there may be expertise in the audience. They are capable to evaluate the conductor's work. – Conductor 1

This is a heavy profession since we are judged all the time. The musicians criticise always and the audience criticises me at the concert. The possible lashings may be even read from the next day's newspaper. Even though I would have done a great job, there may be one musician who has had a



bad day. It is always the conductor who is responsible for that. On the other hand, I am the one who receives the positive feedback from the musicians' success. Relatively often the things I cannot influence are bashed publicly. It is unfortunate. They hurt me and bother always for even long periods of time. I cannot become immune for the criticism presented in the media. If there is someone in the audience who does not like our performance it is fair enough but one negative public comment may change everything. – Conductor 3

According to the interviewed conductors, traveling is an essential part of the conductor's work. To some extent it facilitates the conductors work considerably but it also affects some challenges. Hence, the conductors pay particular attention to it. On one hand, travelling enables the conductor to perform in different concert halls with different orchestras. One conductor explained that they are actually required to travel because the job offerings would otherwise decrease considerably. The travelling may take place in Finland or abroad. The conductor may travel together with the orchestra or alone. The conductors said that they have learnt to use the traveling time efficiently for different things. Some of conductors mentioned that they reply to the emails and make the calls when traveling by train. It was also mentioned that the traveling time can be used for studying the scores and planning the rehearsal schedule. On the other hand, since the conductors travel so much in their work, they pay special attention to it. As the conductors have typically strict schedules, they wish that they have enough time to travel to a new place. For example, if the orchestra performs the concert elsewhere, they need enough time for the traveling. This includes enough rest and becoming acquainted with the concert place. These all help the conductor in preparing for the concert.

My working days may also include traveling and performing days. So basically we travel, rehearse and perform. This involves the time management such as the normal rehearsals. With the intendants and other administrative persons we have made the plan how much earlier we need to leave for the concert place so that we get enough time for rest and for becoming acquainted with the acoustics of the concert hall. – Conductor 1

There are also situations where I am required to cope with two orchestra periods in week or to travel to other side of the globe in a day. Then my job is made very difficult to handle. – Conductor 2

The capability for traveling is required in the conductor's work. Finland is such a small country, so I think that if one did not want to travel at all, the job possibilities would decrease quickly. – Conductor 4

The interviewed conductors had relatively different attitude to the importance of physical work environment. Most of the interviewed conductors had their own workspace, such as office, but they did not do there the artistic work that much. The office was mentioned to indicate the place where the conductor may carry out the administrative tasks and spend time between and after the rehearsals. One conductor said that she has always the scores, baton and the sheet music at her car since she spends so much time on the road. According to the interviewed conductors, home was the best place to do the artistic work, such as to study the scores. The conductors explained that the home is the place where their concentration is not disturbed. Therefore they considered home as an important physical work environment. In addition, two conductors described that their physical work environment included also the training rooms and social premises. However, the conductors felt that these spaces did not belong to them but to the musicians. The conductors emphasised that the rehearsal hall and the concert place play much more important role. It is essential that there are a good acoustics and lighting in a concert hall and it is possible to communicate with the orchestra. One conductor said that their rehearsal hall is in a poor condition and thus they are constantly exposed to noise.

For me it is essential that I can do the work that requires concentration at home. Without this possibility I could not handle my job. The orchestra considers this place as their work environment. They have here the café and dressing rooms. For me it is all the same what is around me. I do have an office here where I can rest but this kind of infrastructure does not really interest me... The rehearsal halls and the concert places, however, have much more significant role. As for the physical work environment point of view, they are actually the most important aspects to me. The rehearsal hall or the concert place may be physically poor but it does not matter if it has good acoustics, lighting and there is good to communicate with people. – Conductor 2

I often work at home. Actually I do almost all the email-work there. In the conservatory my work is disturbed all the time. Sometimes it is pleasant to see other people and talk with them when I do some mechanical work. However, it is much easier to concentrate at home. I do not have here such an office or peace so that I could for example make the phone calls. It would be nice, if I had a workspace. Even a cabinet would be enough. I need space for sheet music. I always carry everything with me and my car acts as an office for me. I have everything I need for working at home or in my car since I move all the time so much. – Conductor 4

According to the interviewed conductors, the all kind of irregularity hinders the conductors in their work. The irregularity was mostly associated to the schedules as well

as to the orchestra and to the changes in them. Conductors' working time varies greatly because the performances are often held at the evenings and weekends. In addition, certain seasons, such as spring and autumn, are typically more urgent for the conductors. It was also mentioned in the interviews that the irregular changes related to the orchestra hinder the conductors' work considerably. If the orchestra is missing some musicians, for example because of the illness, the rehearsals may be impossible to organise. This has also an impact on the rehearsal schedule. It was also mentioned that the changes related to the orchestra affect the conductor's as well as the musicians' work motivation. The certain type of irregularity characterises the conductor's work. For example, when doing the guest appearances the conductor must create a new interactive relationship with a new orchestra. One interviewed conductor explained that creating the relationship can sometimes be difficult and exhausting.

My working time varies as for the all musicians. We are always at work when others are celebrating. – Conductor 3

I need to know about the unusual circumstances such as the new musicians and substitutes. It affects the planning of the rehearsal schedule. The unexpected situations may arise relatively often. At times, I get one or two days for preparing for the situation but for example the illnesses may cause surprises. Then we may have to keep a quick meeting and get an instant replacement from somewhere. These may occur every month or even weekly. Even though the substitute would have been found, he/she may affect the rehearsals negatively with his/her presence. This has then an impact on the outcome of the work and additionally on the work motivation. Sometimes the threshold to cancel the concert is close when thinking of what the consequences are when you take too vulnerable composition to the stage. – Conductor 1

It is challenging that the orchestra changes often. I meet new orchestra every Monday or Tuesday. Creating new relationship with new orchestra every week is sometimes slightly challenging. It can also be exhausting. – Conductor 2

The leadership was seen slightly differently in the daily work of the interviewed conductors. Some of the conductors had more leading role, while the others saw himself/herself hierarchically at the same level with the orchestra. The conductors, who administrative directors of the orchestra emphasised the human resources management. Furthermore, they mentioned the importance of giving feedback. One conductor considered himself as the developer and contributor of the orchestra's actions. The other conductor said that as a director of the orchestra it is important to create an open communication culture with the closest fellow workers (assistants, principals and

concertmasters). The teamwork with these fellow workers contributes to the entire orchestra and it helps to take the conductor's musical vision forward. One conductor, on the other hand, told that orchestras are hierarchically very flat. All the musicians have a high level of education and the whole orchestra aim to use their know-how in favour of the orchestra.

I have been able to develop the orchestra and its actions as in my mind I have always imagined it could be. I am pleased that we have reached the point that all ensembles are working well and they have big performances at great venues. – Conductor 3

In this work it is special that that we conductors cannot do the job without the orchestra. It is also interesting that the all the orchestra musicians have similar education as I have. From that perspective I am one of them. Therefore, this is not a hierarchical work. I am not the chief of this orchestra; not administratively and not even musically. There are so many opinions on the matters. The orchestra does not work as a business enterprise. There may be principals and assistant principals but while we are here together, we do not have any hierarchical levels. My power, if there even is, is limited to only a few situations on the stage. Otherwise, this is very uncontrollable community. Non-hierarchy is an advantage in this work or it is rather a necessity. The musicians have a highly educated know-how and we all use our know-how for this orchestra. If you compare the orchestra, say, with the industrial company, here are completely different methods to make the results. – Conductor 2

In conclusion, the receiving feedback and criticism, and traveling, changing physical work environment, the irregularity in the work and the challenging leadership context were considered the key challenges in the interviewed conductors' work. Most of these aspects are related on how well the conductor may carry through the rehearsals. In addition, these elements may cause the stress to the conductor.

## 6.6. Summary and comparison of the empirical results

The summary of the key enablers and challenges in the chosen professions is presented in

Table 7. It raises the points that were discussed in the previous sections and were stressed in the interviews.

**Table 7.** The summary of the key enablers and challenges in the chosen professions

Profession	Enablers	Challenges
Teacher	<ul style="list-style-type: none"> <li>- Factual information and social skills</li> <li>- Information systems</li> <li>- Motivation</li> <li>- Network</li> <li>- Physical work environment</li> <li>- The national core curriculum</li> <li>- Work environment</li> </ul>	<ul style="list-style-type: none"> <li>- Difficult pupil cases</li> <li>- Education to act in a principal's role</li> <li>- Financial matters</li> <li>- Increased power of pupils and parents</li> <li>- The career development</li> <li>- Mental heaviness of the work</li> </ul>
Physician	<ul style="list-style-type: none"> <li>- Information systems</li> <li>- Interpersonal skills</li> <li>- Learning and specialisation</li> <li>- Management culture</li> <li>- Motivation</li> <li>- Organisational climate</li> <li>- Work experience and</li> <li>- The ability to distinguish the work and leisure time</li> <li>- Work experience</li> </ul>	<ul style="list-style-type: none"> <li>- Differences in the work conditions between the physicians working in a public and private sector</li> <li>- Information systems</li> <li>- Strong professional identity</li> <li>- Urgent workdays</li> <li>- Unevenly distributed working time</li> <li>- Work interruption</li> </ul>
Lawyer	<ul style="list-style-type: none"> <li>- Altruism and emotional intelligence</li> <li>- Broad network</li> <li>- Getting new clients through the lawyer's old clients</li> <li>- Information technology and information systems</li> <li>- Specialisation</li> <li>- The ability to build the overall</li> </ul>	<ul style="list-style-type: none"> <li>- Extensive amount of information in the field</li> <li>- Haste at work</li> <li>- Long working hours</li> <li>- Mentally heavy work in the lawyers' early career</li> <li>- Professional identity and the control of Bar association</li> </ul>

	<p>picture by combining information</p> <ul style="list-style-type: none"> <li>- The physical work environment</li> <li>- The secretaries</li> </ul>	<ul style="list-style-type: none"> <li>- Strict deadlines</li> <li>- The irregularity at the work</li> <li>- The separation of the work and leisure time</li> </ul>
Pastor	<ul style="list-style-type: none"> <li>- Becoming immune from the people's issues</li> <li>- Interpersonal skills</li> <li>- Management culture</li> <li>- Motivation</li> <li>- Professional identity and own personality</li> <li>- Routines</li> <li>- Separation of work and leisure time</li> <li>- The possibilities of IT</li> <li>- The professional ethics do not set strict boundaries</li> <li>- Working from home</li> </ul>	<ul style="list-style-type: none"> <li>- Education</li> <li>- Feedback</li> <li>- Financial matters</li> <li>- The irregularity of working times</li> </ul>
Conductor	<ul style="list-style-type: none"> <li>- Charisma</li> <li>- Communication skills</li> <li>- Intendants and agents</li> <li>- Network and connections</li> <li>- Motivation</li> <li>- Time management</li> <li>- Work experience and routines</li> </ul>	<ul style="list-style-type: none"> <li>- Changing physical work environment</li> <li>- Difficulty in leadership</li> <li>- Feedback and criticism</li> <li>- Irregularity</li> <li>- Traveling</li> </ul>

According to the table 7 and the discussion in the previous sections, most of the enablers in teachers' work, such as factual information and social skills, facilitate the teaching and getting along with the pupils. Moreover, some of the enablers, e.g. information systems, network and work environment, affect the information sharing among the teachers and teacher's job satisfaction. The challenges in the teachers' work cause stress for the teachers and affect negatively the wellbeing at work. The main challenges are particularly related to difficult pupils and their parents.

In physicians work, the enablers help the physicians with their daily patient work and coping with the patients. For example, information systems provide the patient's data, X-ray pictures and laboratory test results quickly. Moreover, they feel that the ability and desire to learn is essential in their work because of themselves but also for the patients' sake. On the other hand, the major challenges in physicians work are related to

the heavy workload, long working hours and interruptions in the patient work. Some of these challenges are generally understood but they cannot be solved e.g. for the financial reasons. As for the lawyers, the key enablers in the lawyers' work are altruism and emotional intelligence, specialisation, the ability to build the overall picture by combining information, the physical work environment, information technology and information systems, the secretaries, broad network and the new clients through the lawyer's old clients. These enablers allow the lawyers to work for the customer's best and to develop their own competence. On the other hand, there are various elements, such as strict deadlines, irregularity at work and long working hours that cause stress, pressure and haste at work.

In pastors' work the enablers, e.g. interpersonal skills, professional identity and own personality, particularly help the pastors to act with people. Moreover, some factors, such as the separation of work and leisure time and becoming immune from people's issues, support the pastors to cope with their heavy work load. On the other hand, most of the challenging aspects in pastors' work cause stress and heavy workload to the pastors. These factors are typically related to interaction with the people. However, some of these aspects were considered as enablers since it is essential that the pastors overcome the challenges of interaction with people. Some of the challenges that are related to pastors' work may also impair the atmosphere at the workplace. The major enablers in conductors' work, such as time management and communication skills help the conductor to carry out the rehearsal period from the beginning to the end and to convey the composer's intentions to the orchestra. In addition, some factors, e.g. networks and agents allow the conductors to get job offerings. On the other hand, there are a few aspects e.g. poor physical work environment and irregularity at work that hinder the conductors' rehearsing work. In addition, these elements may cause the stress for the conductor.

As a whole, there were seen some similarities in the enablers as well as the challenges that the professionals raised in the interviews. The interviewees considered the enablers in a general level and mentioned typically the elements that facilitates their core work, such as teaching, patient work and rehearsing the orchestra. In addition, most of the enablers that the interviewees pointed help them to cope with their work, handle the stress and heavy workload as well as to support the wellbeing at work. Similarly, the challenges that were raised in the interviews were related to the professionals' core work as well as wellbeing at work but in the negative manner. Indeed, they hamper the professionals to carry out their core responsibilities such as handling the legal cases properly. Additionally, they cause the heavy workload and stress for the professionals.

It is also evident that the factors affecting the core work and wellbeing at work may overlap with one another. For many professionals, the factors causing stress and pressure have an indirect impact on the core work. This is seen, for example, in the

teachers' work in a way that the teachers need to consider their performance and the teaching more carefully because of the increased power of the pupils and their parents. At the same time, this aspect affects stress for the teachers. On the other hand, if the core work is made difficult, it can increase the pressure at work. Similarly, if the framework for pursuing the profession is convenient in terms of organisational climate, motivation and support received from colleagues, the core work is also facilitated. Some of aspects can be considered as an enabler or a challenge depending on the profession and the fact how the aspects were emphasised in the interviews. There are also divergent views within the certain professions depending on where the person works.



## 7. DISCUSSION AND CONCLUSIONS

This chapter summarises the findings of this study, assess the study critically and offer the possible suggestions for future research. The chapter starts from answering to the sub-questions presented in section 1.2 and after that the main research question will be discussed. Finally, this study will be evaluated and the themes for the future research will be given.

### 7.1. Results of the study

The main objective of this study was to analyse the knowledge work enablers and challenges from the point of view of different professions. The chosen professions were teacher, physician, lawyer, pastor and conductor. The main research question “What are the enablers and the challenges in the knowledge work of different professions?” was discussed through three sub-questions. The results of this study will be presented by providing first the answer to the three sub-questions and then to the main question.

*What is knowledge work and how to define a profession?*

In this thesis, it was discovered that the knowledge work has developed along with the rise of knowledge society. Drucker, Machlup and Bell can be considered as the pioneers of knowledge work as they first presented the terms non-manual work, knowledge work and knowledge worker. Knowledge work can be defined from different perspectives. The term is relatively easy to understand by comparing knowledge work with manual or traditional form of work. The comparison can be based, for example, on the task structure and skill requirements. Knowledge workers have gained a high education while manual workers have been taught and trained within the organisation. In addition, knowledge work is linked the specialised and deep skills to solve complex problems and issues. Manual workers have gained relatively narrow and often functional skills that help them to carry out their duties in the organisation.

In this study knowledge work was understood as creating, sharing and applying knowledge which is done by talented, highly educated and autonomous individuals. They also use different information tools and models which generate complex, intangible and tangible results. In addition, knowledge work was discussed in terms of different knowledge work actions. In this thesis, the key knowledge work actions were related to learning, knowledge acquisition and sharing, analysis, collaboration and communication with others.

The study of the professions started from discussing the professions from historical viewpoint. The professions were arisen gradually to the context of the university system during the Middle Ages. In those days, the most important profession was the clergy but there were also two other important professions, physicians and lawyers, in the medieval university system. These professions were considered as older professions. Conductors were explained as newer profession since the roots of the conductor's profession are traced to the times of classicism. Some studies argued that teachers cannot regard as a profession but rather a semi-profession. In this thesis, it was however indicated that teachers fulfil the definition of the profession.

To understand the professions they were defined with a typological and a functional definition. According to them the professions are based on theoretic knowledge and the knowledge-base is achieved through the several years of education, vocational training and experience. Moreover, a qualification test is required in order to perform the profession and the ethical code and set of norms guide the professions. Due to the nature of the professional work altruism is typical for the professionals. In addition, the professionals are usually members of the professional associations.

In addition to this typological definition, the professions were understood by seeing the segregation of different professions and the social operating systems. According to this, one may talk about the profession, when it is professionalised and the certain tasks are defined exclusive to the profession. As a consequence, the physicians have a monopoly status in health-care system whereas teachers have got a key role in the education system. Similarly, the lawyers enjoy the ruling status in the judiciary while pastors have important role in the religion system. In addition, the conductors continue the tradition of the western art music. Professionals work typically with the important themes, such as illness, guilt, grief, education and guidance. It was explained that in such situations people may even become somewhat dependent on the professionals and this requires the certain communication and interaction skills from the professionals.

It was also examined that each of these professions gain a strong specialised knowledge-base through the university education and vocational training. Furthermore, they all continue the training after the graduation to obtain new information and develop their skills. The access to the education and accordingly to the profession is limited among these five professions. It was indicated that ethics and standards standardise particularly the physicians', pastors', lawyers' and teachers' work. The ethicality of the work entails the altruism characteristics for these professions. Each profession that were discussed in this study has been given an exclusive right to perform the certain tasks and to make independent decisions in their work. In addition, they have an authoritative position over their customers and other occupational groups.

*What are the factors enabling knowledge work?*

This study focused on four different aspects enabling the knowledge work: physical work environment, organisational culture and social aspects, job involvement and motivation, and finally the information technology. The first element was physical work environment. It was indicated that autonomy and privacy are crucial for the knowledge workers to perform their tasks since their work is typically cognitive and requires concentration. In addition, the knowledge workers may also have tasks related to collaboration and communication, and knowledge acquisition and sharing. These tasks may call for interactive workspaces. The second aspect that was discussed as an enabler of knowledge work was related to organisational culture. It was examined that the co-operative atmosphere contributes to the knowledge work actions such as collaboration, communication and knowledge creation. The positive organisational culture enables also the team work. Then, the employees may understand that their expertise will develop further as a result of co-operation with the colleagues. Combining the existing knowledge with the colleagues it is able generate new ideas and solutions.

This study indicated that the management culture affects considerably the organisational climate. If the management culture is favourable, the supervisors encourage the knowledge workers to come up with new ideas and to innovate new solutions. The third aspect enabling knowledge work that was discussed in this study was motivation. Enhanced motivation, performance, loyalty and commitment are the key issues to contribute to work performance. Job involvement is one instance of being motivated and it can affect the knowledge workers' work performance. Information technology was the fourth element that was discussed in this study as an enabler of knowledge. Nowadays, there are various IT tools that help the knowledge workers to acquire, store, interpret and disseminate information. These tools are often company-specific sophisticated tools that enable various knowledge work actions. In addition, it was mentioned that IT encourages the emergence of looser and more spatially distributed organisational structures which favour networking and mobile work arrangements. This also releases knowledge workers from performing tasks within the normal office hours.

In general, all of these areas that were discussed in the literature review got realised in different professions in the empirical part of the study. Most of the enablers raised in the empirical part enabled particularly the core knowledge work in each profession. For example, appropriate physical work environment was considered to facilitate the teaching while the information systems helped the lawyers and physicians to acquire information quickly. In addition, the enablers emphasised in the empirical part supported the professionals' wellbeing at work. Moreover, they support the professionals to cope with their heavy workload. There were also various aspects that affected positively the professionals' motivation. For example, the professionals valued the freedom to carry out their work without the supervisors' control. Moreover, the

basic idea of the work, the vocation or desire to do the job made the professionals fundamentally motivated to their work. In addition to these elements, the empirical part raised a lot of different aspects that enable the knowledge work in different professions. These aspects were closely related to the special features of the professions. For example, the national core curriculum facilitates the teacher's work since sets the framework which clarifies their work considerably.

*What challenges are related to knowledge work?*

The key elements challenging knowledge work were discussed through the physical work environment, social, cultural and contextual elements and information technology. First aspect that was analysed in this study was the physical work environment. It was discussed that poor physical work environment may challenge the tasks and the knowledge work actions that require concentration, such as planning, thinking, learning and analysis. In addition, the poor meeting areas may hinder the collaboration and interaction with colleagues. This has a negative impact on the team work performance which is integral part of knowledge work. The second aspect that was analysed in this study was the social, cultural and contextual elements in knowledge work. The social and cultural barriers were related to the rigid organisational hierarchy and poor incentive system that do not encourage and motivate the employees. The contextual barriers were associated to the situation in which the knowledge workers are unwilling to share and apply the knowledge that is obtained from the colleagues. The unfavourable organisational culture may decrease the knowledge workers' willingness to share knowledge. In addition, the employees may not even understand the benefits of sharing knowledge.

The motivation and job satisfaction were also discussed in the theoretical part of this study. It was stated that if the knowledge worker lacks the purpose and satisfaction to work, he/she may be unmotivated to achieve the objectives. Therefore, both collaborative and individual work may become more unattractive to carry out. In addition, the relationship between autonomy, stress, control and salary was discussed in this thesis. It was mentioned that higher autonomy may increase the stress and tighter control at work. Moreover, this also affects the job satisfaction and may challenge the key knowledge work actions, such as knowledge acquisition and application. The information technology as a knowledge work challenge was discussed from the perspective of mobile and non-mobile work. It was indicated that the mobile devices may cause unnecessary and unproductive interruptions. This may also hinder the knowledge workers to concentrate on their tasks. In addition, there is a lot of information available and it may affect the scarce attention. The knowledge workers may find it difficult to recognise the important information for them. Also, there were indicated to be more information available than the knowledge workers have attention to understand.

Physical work environment and information technology were also realised as the knowledge work challenges in the empirical part of the study. Particularly the lack of space was explained to harm the physicians' daily patient work. The conductors, in turn, have to work sometimes in the poor training and concert halls which may interfere with communication and cause the hearing damages. In addition, information systems cause critical challenges especially for the physicians. The social, cultural and contextual elements were not discussed in the empirical part in the same manner as in the theoretical part of the study. The interviewed professionals did not mention these elements as the challenges in their work. However, the empirical part raised various other aspects that challenge the knowledge work in the chosen professions. Firstly, the challenges had a negative impact on the professionals' core work, such as teaching, taking care of patients, handling clients' legal cases and so on. For example, the financial issues were underlined as a negative aspect of work by the teachers and pastors. Secondly, the aspects raised in the empirical part as the knowledge work challenges weaken the wellbeing at work and cause them more stress and pressure. For example, haste at work cause longer hours at work particularly for the physicians and lawyers. This has also a negative impact on the separation of the work and leisure time. In addition, to these aspects the empirical part discussed also the challenges that were typical just for the each profession. For example, the career development was indicated to be problematic for the teachers while the strict deadlines were a challenge particularly for the lawyers. These elements were affected by the special characteristics of the different professions.

The main research question: *What are the enablers and challenges in the knowledge work of different professions?*

As a whole, it can be said that there are various aspects that affect the professionals' work either positively or negatively. By comparing the professions with one another it is found that there are a lot of similarities in the different professions. For example, information technology and information systems enable the teachers', physicians', lawyers' and pastors' work. They facilitate particularly the information acquisition and communication. Teachers and pastors use information technology in a very innovative way to take the most power of teaching and communicating with the parishioners. On the other hand, even though the physicians' work is somewhat dependent on the information technology, the non-functioning information systems cause one of the major challenges in their work. The information technology also allows the particularly the pastors to work from home. However, the lawyers are increasingly forced to work from home with mobile technology. In the lawyers' work the boundary between the work and leisure time become blurred since they have to often work on weekends and holidays.

Information technology was also discussed in the theoretical part of the study. It was seen in some cases as an enabler of knowledge work but also as a challenge. This situation was also realised in this empirical part of the study. For some professions IT and information systems act as a major enabler of the work. In the theoretical part it was stated that the knowledge worker may acquire, disseminate, store and interpret the information. These were also the actions that the interviewees said they did with the information technology. However, for the physicians the information systems cause critical challenges in their work because they may even prevent the normal patient work.

It was indicated that especially, teachers, lawyers and conductors benefit from the broad network. For the teachers and lawyers, the network acts as a channel for disseminating and obtaining information. In addition to these characteristics, the conductors may get job offerings through the network. All the discussed professions need social skills in their work. They are constantly dealing with people and therefore they need to have ability to communicate with them. Also, the interviewed professionals said that through the work experience the interpersonal skills develop the most. In addition to social skills the importance of positive work environment is essential for all the professions. The work environment helps them to enhance the wellbeing at work. In addition, the management culture is one aspect that enhances the positive work environment in the physicians' work. Management culture supports the physicians' autonomous work which is one of the typical elements defining the profession in general. The positive work environment and management culture were also analysed in the theoretical part of this study. It was indicated that they facilitate both the individual and interactive knowledge work. As a whole, it can be stated that the organisational culture and the social elements as the enablers of knowledge, studied in the theoretical part, were realised also in the empirical part of this study.

For all the professions, the separation of work and leisure time was important. Especially for the physicians and the pastors this was said to be essential. The lawyers, in turn, have difficulties in distinguishing the work and leisure time. For the conductors, the boundary between work and leisure time seems also to obscure. This is because their childhood hobby has become their occupation. Becoming immune for difficult things facilitate particularly the teachers', physicians' and pastors' work. This helps them to handle the heavy circumstances more comprehensively. This ability increases through work experience. The lawyers also need this ability and it facilitates their work. However, the young lawyers have major difficulties with externalising themselves from people's issues.

The certain routines support the pastors' and conductors' work. For example, through the work experience the conductors get the routine to take the rehearsal period through from the first rehearsal to the concert. The pastors, in turn, can prepare the speeches

quicker and to deliver the services more naturally. Also, in the physicians' work the work experience helps them to do the patient work and to avoid the stress better. Intendants, agents and/or secretaries facilitate especially the conductors' and lawyers' work. Intendants, agents and secretaries do the administrative tasks and, thus, release the professionals to perform their core work.

The large amount of information is a challenge for some professions. Especially the lawyers and physicians need to be aware of the changes and updates of the knowledge in the field. For the lawyers, the extensive amount of information is relatively challenging to handle since the theoretical knowledge must be applied to practise. Moreover, the extensive amount of information requires especially the lawyers and the physicians to specialise in the particular sector of expertise. This also acts as a motivator for these professionals. The conductors also consider the large amount of information, that is music, and the learning as the motivators in their work. In addition, almost all the professionals need information from other fields. For example, teachers need legal information and the conductors must be aware of marketing and human resource management. The amount of information was discussed also in the theoretical part as a challenge of knowledge work. It was stated that the large amount of information may cause difficulties in finding the right information from various sources. This is in line with the empirical findings. Indeed, particularly lawyers and physicians mentioned this as a challenge but so that it was also their motivator for learning.

The physical work environment is particularly important for the lawyers and teachers. For example, appropriate sports facilities and equipment enable the physical exercise teacher's work. The office which is well located helps the lawyers to make the contacts and meet the clients. However, the conductors and the physicians may consider the physical environment as a challenge in their work. The lack of space may harm the physicians' daily patient work. The conductors, in turn, may have to work in the poor training and concert halls which may interfere with communication and even cause the hearing damages. The physical work environment was also discussed in the theoretical part and it was seen both as an enabler and challenge of knowledge work. When considering physical work environment as an enabler of knowledge work, it was analysed that the physical work environment that provides autonomy to carry out the individual tasks as well as interaction to perform the collaborative tasks with the others enable knowledge work the most. Especially the teachers value the physical work environment that supports autonomy while the lawyers emphasised also the interactive workspaces. When the physical work environment was discussed as a challenge, it was done by dividing the aspects of physical work environment into four parts: comfort, office layout, interaction and distraction. The office layout and distraction are significant challenges in the physicians' work while the comfort, such as noise and acoustics, are problems for the conductors. Therefore, it can be said that the physical work environment discussed in the theoretical part got realised as an enabler and

challenge in this empirical part. In addition, the theoretical part valued the distributed workspace arrangements and mobile work. It emphasised the possibility to carry out the tasks when the knowledge worker feel productive. On contrary to the theoretical literature review, many professionals wanted to separate their workplace and home from each other. Moreover, some professionals, such as physicians and lawyers, did not even have an access to the information systems from their home.

It was also indicated that there were various different elements that motivate the professionals in their work. These elements naturally changed within the certain profession depending on the person. In any case these elements supported and enabled performing their work best and help them to cope with their work. Motivation was also discussed as an enabler of knowledge work in the theoretical part of this study and hence it was realised in the empirical part. Motivation was divided into intrinsic and extrinsic aspects. In the empirical part, particularly the intrinsic motivational factors were discussed and highlighted in the interviews. These were most commonly related to the autonomy at work, independence, personal or professional growth as well as appreciation, just like was discussed in the context of the literature review.

In some cases the other people, such as pupils and their parents, patients, clients, parishioners and musicians, have somewhat negative impact on all the five professions. Pupils and their parents have got increased power in relation to the teachers. Patients', clients' and parishioners' problematic matters cause stress and heavy workload for the physicians, lawyers and pastors. Moreover, the changes in the compositions in the orchestras cause irregularity and make the conductors' work challenging. Additionally, in the teachers', physicians', lawyers' and pastors' work the mental heaviness of the work rises as the most critical challenge in their work.

Haste at work and long working hours were significant challenges especially in the physicians' and the lawyers' work. These elements cause stress and pressure for the professionals and increase further the mental workload. In addition to the physicians and the lawyers, the pastors also worked long hours.

To some extent, receiving feedback is a problem both for the pastors and conductors. In some cases, the pastors find it difficult to get feedback. Indeed, they need to often read the feedback from the people's faces. Moreover, when they possibly get negative feedback, it is actually addressed to the Church. The conductors are always assessed by the musicians, audience and media. Especially, the media's criticism can hurt the conductors and influence them for a long time. The financial matters complicates the teachers' and the pastors' work. It has a negative impact particularly on the physical work environment and the increased workload. For example, teachers must teach increasingly larger groups and the parishes need to rely on the volunteers' help since they cannot afford to open and fill the posts.

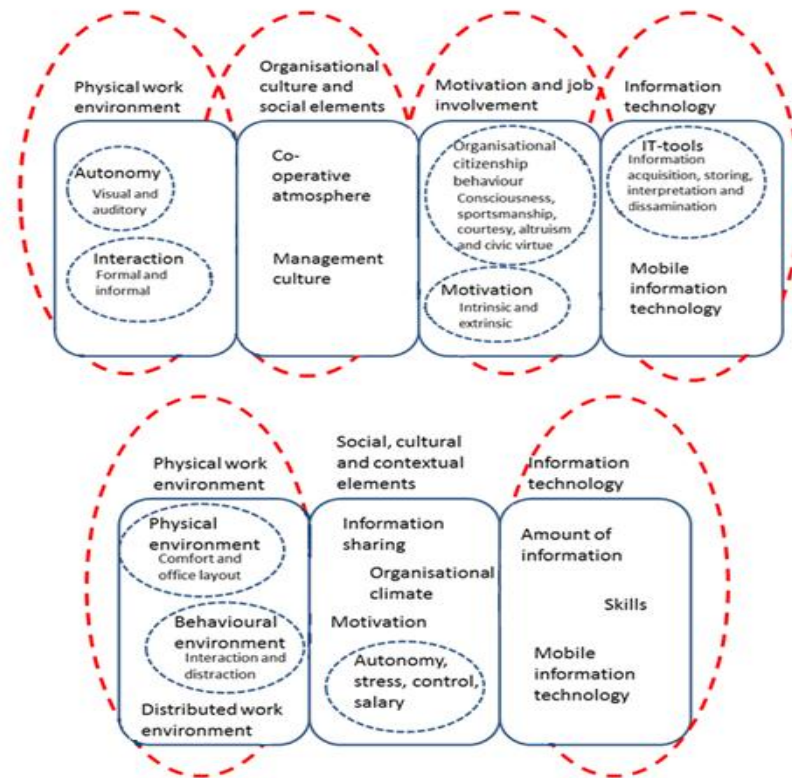


In addition to the previously discussed similarities in the enablers and challenges in the knowledge work of different professions, the empirical part of this study also raised the special features that facilitated or hindered the knowledge work in the chosen professions. These elements were unique to each profession and they particularly affect the fact that the enablers and the challenges in the different professions are not completely the same regardless of the profession. For example, the national core curriculum set the framework for teaching and, thus, clarifies the teachers' work. On the other hand, not only the difficult pupils but also the parents challenge significantly the teachers' work. Also, the teachers' career development turned out to be contradictory based on the interviews. The permanent position is safe option but there are very available. In physicians' work, the differences between working in the public sector or in the private sector were clearly identified in the interviews. This affected divergent views within the professions based on where the physician was working. Moreover, the physicians' strong professional identity hinders the separation of work and leisure time. In addition, it affects the other people and their behaviour in an unwanted manner.

The lawyers, in turn, get typically the new clients through their old clients. The new clients may then already know the lawyers' working methods and marketing of the lawyers' services happens conveniently by word of mouth. The lawyers' work is largely controlled by the strict deadlines. They cause stress and haste at work which eat the lawyers' resources. In addition, the Bar association controls the lawyers' appropriate behaviour and level of know-how. As for the pastors, the usage of social media in their work has increased over the recent years and it provides an alternative way to communicate with the parish's workers. On the other hand, the pastors' poor education provided by the university hinders their work in practise during their early career since the education is so theoretical. The education do not emphasise the aspects that the pastors actually would need in their work. Finally, the time management facilitates significantly the conductors' work. It helps the conductors to plan and assess the certain rehearsal or the entire rehearsal period. It clarifies the conductors' work and makes it more structured. On the other hand, the conductors travel considerably in their work and it needs to be considered carefully. If the conductor travels with the orchestra it requires a lot of time and other resources but in some cases they are not taken into account relatively well. Traveling is a requirement in conductors work since otherwise the job offerings and the development of professional competence would cease. In addition, the conductors have challenges in leading the orchestra since it is hierarchically low and all the musicians are typically in the same level in their expertise. This may cause conflicts the conductors' work.

Finally Figure 10 summarises the emphases in the theoretical and empirical parts. The red dashed line circles indicate which areas discussed in literature review were realised in the empirical part of the study.

**Figure 10.** Summary of the emphases in the theoretical and empirical parts.



The figure illustrates that almost all areas that were discussed in the literature review got realised in the empirical part of the study as described previously. In addition to these elements, the empirical study raised a number of other factors that possibly enable or challenge the knowledge work in different professions. However, from the knowledge work challenges the social, cultural and contextual elements were not discussed in the empirical part in the same manner as in the context of the literature review. The interviewed professionals did not mention these elements as the challenges in their work. On the contrary, they were rather considered as the enablers of knowledge work. The reason for this may be related to the characteristics of the professionals' knowledge work which is typically autonomous and on the hand collaborative. The organisational culture and the management provide the professionals the freedom to carry out their work. Moreover, their vocation and desire to do the job make the professionals fundamentally motivated to their work.

## 7.2. Discussion and implications

The purpose of this study was to answer to the question “*What are the enablers and the challenges in the knowledge work of different professions?*” There were also three sub-questions supporting the main research question and they were answered in previous section. First these elements were discussed theoretically in the form of literature review. After that the enablers and challenges in knowledge work were examined

empirically through narrative interviews. The theoretical and empirical parts were separated from each other so that the theoretical part did not direct the empirical part too much. In addition, this separation allowed finding completely new elements that were not discussed in the context of literature review. This was also happened in practise.

Most of the aspects that were discussed in the theoretical part were realised during the empirical phase of the study. Only the social, cultural and contextual elements, that were discussed in the theoretical literature review as the challenges in the knowledge work, did not get realised similarly in the empirical part of the study. The reason for this may lie on the fact that this aspect discussed the challenge from the knowledge sharing perspective. This, however, was not considered as a problem in any of the chosen professions. The organisational culture and social aspects were considered as the enablers of knowledge work in these professions. The nature of the professionals' knowledge work is typically related, on one hand, to autonomous performance and, on the hand, to the collaborative work. The organisational culture and the management were indicated to provide the professionals the freedom and responsibility to carry out their work independently.

As a whole, there were seen also a lot of similarities in the enablers and the challenges that were indicated in the empirical part of the study. The enablers were considered in the empirical part in a general level and they were typically the elements that facilitate the professionals' core work, such as teaching, handling the legal cases and rehearsing the orchestra. In addition, the enablers that were discussed in the empirical part of the study helped the professionals to cope with their work pressure, handle the stress and heavy workload. Indeed, the enablers were strongly related to the wellbeing at work. In the same way, the challenges that were studied in the empirical part of this research were associated to the professionals' core work as well as wellbeing at work but in the negative way. Thus, they were considered as the elements that hindered the professionals to carry out their core work such as taking care of patients properly. Additionally, they caused the heavy workload and pressure for the professionals. It seemed that the knowledge work enablers considered in the empirical part, however, supported more the professionals' core knowledge work while the challenges were more commonly related to the wellbeing, stress and pressure at work.

It was seemed that the factors affecting the core work and wellbeing at work linked somewhat with one another. For many professionals, the factors causing stress and pressure had an indirect impact on their core work. This was seen, for example, in the teachers' work so that the teachers need to consider their performance nowadays more carefully because of the increased power of the pupils and their parents. At the same time, this aspect causes stress for the teachers. Similarly, if the core work is made difficult, it can increase the pressure at work. On the other hand, if the framework for

pursuing the profession is appropriate in terms of organisational climate, motivation and support received from colleagues, the core work may also be facilitated.

On the other hand, the empirical part of the study raised a lot of new elements that possibly enabled or challenged the knowledge work in chosen professions. These elements were similarly affected the professionals' core knowledge work as well as the wellbeing at work either positively or negatively. However, they were emphasised and raised because they were closely connected to the special features of the different professions. These characteristics were individual to each profession and they particularly made it that the enablers and the challenges in the different professions are not completely the same regardless of the profession. These special aspects were not discussed in the theoretical part. One reason for this is the fact that the theoretical part discussed the knowledge work enablers and challenges in general level and did not focus on any particular profession. Because of these specific enablers and challenges in each profession, they all are unique by nature. Therefore, the general and comprehensive model to support the knowledge work in different professions would be relatively difficult to create without taking the special aspects of each profession into account.

### **7.3. Assessment of the study**

This thesis examined the knowledge work enablers and challenges from the perspective of different professions. There were five chosen professions through which the phenomenon was investigated. Thus, the study highlighted two different research themes, knowledge work and professions.

On the whole, this study can be considered as successful since it managed to find the answer to the main research question with support of the three sub-questions. The research strategy was a qualitative research and it was based on the hermeneutic idea of science. According to the hermeneutic philosophy of the science, the research phenomenon is typically unique and that type of research aims to gain the comprehensive insight of the research case. Moreover, it does not prove independent results that would be easy to generalise since the hermeneutic approach discusses the phenomenon through understanding and interpretation. As a consequence, it is also difficult to reproduce the research as such. (Olkkonen, 1994, pp. 50-54.) Ghauri and Grønhaug (2005, pp. 108-109) say that the qualitative research, in turn, can be characterised as a process oriented completeness in which the skills and experience of the researcher play an important role in the analysis of the data. In addition, the theory part of this study followed partially the conceptual research approach. The conceptual research approach in the theory part constituted a general understanding of the knowledge work enablers and challenges in different profession and then it was deepened in the empirical part of the study. The aim of this study was to gain insight

and understanding of the research phenomenon and not to give straight guidelines and instructions. Thus, the study reached its objectives well.

In addition, this research stayed well within the limitations set for it. For example, the productivity aspect was left outside the scope of this study. It was a good decision since the knowledge work of traditional professions is human-oriented by nature. In the empirical part of this study, it was found that the enablers and challenges bore little relation to the productivity issues but rather to the human factors and wellbeing at work. However, if this perspective had been within the scope of this study, the research findings could have been a slightly different.

The research was conducted as a multiple case study research by using the narrative interview strategy in the empirical part. According to Ghauri and Grønhaug (2005, pp. 79-81), the quality of the information gathered from the interviews is highly dependent on the measurement procedures followed in the gathering of the data. One of the main purposes of measure something is to obtain valid measures and to get to know what is actually supposed to happen. Reliability, in turn, indicates the stability of the measure. The quality of this study can be assessed following Yin's (1994, pp. 32-37) criteria for judging the case study research designs. The criteria consist of four different elements – construct validity, internal validity, external validity and reliability – that test the quality of this research. Ghauri and Grønhaug (2005, p. 65) explain that the internal validity assesses whether the results obtained within the study are true and the causal effect occurs between two variables. This validity test is suitable for cause-effect cases (Ghauri and Grønhaug, 2005, p. 65). As this study is not this type of research by nature, the internal validity is difficult to assess further. According to Yin (1994, p. 33) the construct validity is about “establishing the correct operational measure for the concepts being studied”. This kind of test is important for the case study and it is typically considered in the data collection phase. Ghauri and Grønhaug (2005, p. 86) state that if construct validity is poor the research findings may be meaningless destroying the internal and external validity of the research results. The construct validity was attempted to achieve and improve by examining altogether five different professions and interviewing four representatives of each profession. As there were five different older and newer professions it was possible to gain a better understanding of the characteristics of their work. Moreover, since there were many interviewees chosen to this study, the more realistic results were possible to obtain.

Yin (1994, p. 35) states that the external validity examines whether the results of the study can be generalised other than to the certain study. Stake (2005, p. 460) explains that the case studies are convenient options in the studies of refining theories, suggesting complexities and establishing the limits of generalisation. Indeed, the case study in general is relatively poor basis for making generalisations. Stake (2005, p. 460) continues by saying that such a small samples of cases provide a questionable grounds

for stating grand generalisation. However, Stake (1995, p. 7) presents the concept of petite generalisation. This means that even though the empirical data would not be statistical by nature and does not provide the grand generalisation, the versatility the data gathered from the interviews allows the petite generalisation to be made (Stake, 1995, p. 7). Moreover, the key findings of this research are relatively general by nature and hence it indicates that the petite generalisation can be concluded. There were five different professions chosen in this study in order to get a better insight of the knowledge work enablers and challenges in different professions. In addition, there were four representatives of each profession. Thus, it was possible to show easier what enablers and challenges from the literature review actually realised in the empirical part of the study. However, the professionals work in relatively different fields and with different tasks so this number of interviewees does not guarantee the generalizability.

Finally, the reliability test assesses whether the researcher could end up to the same conclusion using the same procedures and analysing the data with the same methods as used in this study (Yin, 1994, p. 36). This study was the qualitative study by nature and it indicates that the researcher's own interpretation and understanding affects the research findings to some extent. Therefore, the reliability is relatively hard to achieve in this study. Moreover, it is worth remembering that the interviews were done by using the narrative strategy. According to Chase (2005, pp. 666-667), this means that the narrator's voice may be interpreted and represented differently by different researchers. Chase also explains that the range of narrative options within any group of people is potentially limitless. (Chase, 2005, pp. 666-667.) Therefore, the narrative interviews may offer slightly different results if they were re-conducted, and the researchers may interpret the narratives with different emphases. The reliability is a problem in every small qualitative study. This study, however, stated successfully different conclusions and interpretations based on the interviewees' viewpoints. The analysis of the empirical findings was done on the basis of the interviewees' narratives. It was also a reason why this study presented a lot of straight quotes from the interviews.

#### **7.4. Suggestions for future research**

This kind of knowledge work research from the viewpoint of different professions has not been conducted before. The perspective of studying traditional professions is interesting since they are developing along with the knowledge age. For the research community this thesis provides an interesting insight of the enablers of challenges of the knowledge work in the different professions. The purpose of this study was to gain understanding of phenomenon. This study did not focus on solving the possible challenges of knowledge and providing guidelines for the knowledge workers and their managers. This kind of research topic is important and hopefully it will gain attention among the research community in the future.

This research focused on five different professions which could be also examined in future. The professions may remain the same but on the other hand they may also be changed. It is evident that by widening the research scope to new professions it is possible to obtain more in-depth understanding of different professions. This research was relatively small qualitative study but the knowledge work in different professions could be investigated with a quantitative survey research. The survey can be used to reach a number of professionals. This qualitative study can provide a useful basis for the creation of the survey. With the survey research, it can be showed what enablers and challenges actually realise.

One aspect which also could gain research interest is the leadership perspective. The professions that were examined in this study are strongly ethical professions. This means that the leadership needs to be ethical. Most of these professions are constantly involved in moral decision-making. This fact was also raised in the empirical part of this study. The ethical and moral actions of different professions could definitely obtain more research attention.

In this study it was noticed that there are relatively different enablers and challenges depending on whether the knowledge worker is experienced or inexperienced worker. This could be investigated more since the young knowledge workers are the productive core of the economy. In addition, it is evident that the working years are getting longer and therefore the employees' working conditions needs to get more attention. This kind of research may offer new information which could help to enable the young employees' knowledge work

One important aspect that was not dealt with in this thesis is the productivity of knowledge work in the perspective of different professions. In recent years, the measurement of the knowledge work productivity has gained a lot of interest among the research community. It would be interesting to study this topic from the perspective of different professions since in this work the productivity issues were also raised in the interviews. Is it possible to measure similarly the productivity of the knowledge work of different professions?

In this study, the professions were examined in Finnish perspective. The country, culture and politics affect naturally the characteristics of the professionals' knowledge work. It could be useful to compare the professions internationally. This could offer versatile information of the enablers and challenges of knowledge work and thus, the working conditions could be improved more efficiently. Finland could adapt the best practises from other countries.

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## APPENDICES (2 pieces)

APPENDIX 1: Professions, interviewees' gender, and the date and the duration of interview.

Teacher	Teacher 1	Man	24.8.2012, 1h 30 min
	Teacher 2	Woman	14.9.2012, 1h 15 min
	Teacher 3	Woman	21.9.2012, 1h 45 min
	Teacher 4	Man	24.9.2012, 1h 15 min
Physician	Physician 1	Woman	23.8.2012, 1h 30 min
	Physician 2	Man	4.9.2012, 1h 15 min
	Physician 3	Woman	13.9.2012, 1h
	Physician 4	Woman	12.9.2012, 1h 15 min
Lawyer	Lawyer 1	Woman	21.8.2012, 1h 30 min
	Lawyer 2	Man	29.8.2012, 1h
	Lawyer 3	Man	30.8.2012, 1h 45 min
	Lawyer 4	Woman	6.9.2012, 1h 15 min
Pastor	Pastor 1	Man	15.8.2012, 1h 45 min
	Pastor 2	Man	21.8.2012, 1h 15 min
	Pastor 3	Man	31.8.2012, 2 h
	Pastor 4	Man	25.9.2012, 1h 15 min
Conductor	Conductor 1	Man	30.8.2012, 1 h
	Conductor 2	Man	20.8.2012, 1h 15 min
	Conductor 3	Man	23.8.2012, 1h 15 min
	Conductor 4	Woman	20.8.2012, 1h 15 min

APPENDIX 2: The interview questions that were used as a basis for the narratives

1. Describe your education and career path
2. Describe a typical working day and describe one working day from this week
3. Describe what kind of knowledge and skills you need in your work
4. Describe what things are going well in your work and why.
5. Describe what is particularly challenging in your work and why.