Tommi Vihervaara

Corporate Collaboration in Education

A Practical Handbook for Universities and Companies

Aalto University

Aalto-C 6/2018

Corporate collaboration in university education — what is it and what resources does it require from universities and companies? How does this kind of collaboration work in practice, and what are the benefits for participants?

This book is meant for both universities and companies. Additionally the book can be used by other collaborative partners of educational institutions, such as public organisations, associations and foundations.

For anyone interested in corporate collaboration, this book provides an overview on the possibilities for educational collaboration. The practical advice and examples in this book analyse the strengths and challenges of different forms of corporate collaboration from the perspective of both educational institutions and companies.

ISBN 978-952-60-7826-7
ISBN 978-952-60-7827-4 (pdf)

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Tommi Vihervaara

Corporate Collaboration in Education

A Practical Handbook for Universities and Companies

First edition

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Translated by Sam Parwar

Designed by Marion Robinson

Published by Aalto University

Printed by Nordprint, Helsinki 2018

ISBN 978-952-60-7827-4 (pdf)

Photo: Martti Ojalainen

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In addition to his main work, Vihervaara also trains not only students but also university, corporate and other organisational representatives on the topics of corporate collaboration in education and project management.

Previous books co-authored by Tommi Vihervaara are:

• "*Elektroninen liiketoiminta– Avainkäsitteistä ansaintamalleihin*" ("*Electronic Business – From Key Concepts to Revenue Models*", Mallat, Tinnilä & Vihervaara, Teknova Oy, 2004)

• "*Elektroninen liiketoiminta 2.0*" ("*Electronic Business 2.0*", Tinnilä, Vihervaara, Klimscheffskij & Laurila, Teknova Oy, 2008).

The Corporate Collaboration in Education book project was supported by

Aalto University

KAUTEfoundation
Finnish Science Foundation for Economics and Technology KAUTE

THE HSE SUPPORT FOUNDATION SR.

EKONOMIT MER
THE FINNISH BUSINESS SCHOOL GRADUATES

TEK ACADEMIC ENGINEERS AND ARCHITECTS IN FINLAND

To the reader

In 2015, I wrote the Finnish edition of this book, *Corporate Collaboration in Education*. It was the first Finnish-language book that focused on corporate collaboration in education on a practical level. While there had been some scientific research on corporate collaboration, the results of these studies had not provided the answers to the practical questions and needs that ultimately determine the success or failure of the collaboration that occurs between universities and companies.

The book was a success, and soon my calendar was filled with expert speaker engagements. However, it also quickly became very apparent that an increasing number of professors and teachers at Finnish universities do not read or speak Finnish as their native language. For example, over a third of the new professors at Aalto University – Finland's largest university of technology, business and design – are not natively proficient in Finnish. Internationalisation has become de rigueur in most companies, and English is now the operational language of the corporate world. Thus the strong demand for an English-language edition of this book.

This edition of the book is an attempt at fulfilling this demand. This book is also my homage to all those who work tirelessly within various universities and companies in the often very unforgiving trenches of collaboration. With this book, I want to provide 1) the tools that will help people better understand the field of collaboration and 2) the tips that can help facilitate practical activities. The chapters of this book also include

practical examples of different cooperation concepts, as well as a critical review of the strengths and challenges of each model. This book is based on over a decade's worth of practical experience in organising corporate collaboration in the university sector as well as the hundreds of discussions that I have had on the topic with various colleagues and corporate representatives. This book was written with the Finnish university and corporate worlds in mind. However, the same basic concepts and challenges for collaboration exist in every country where universities and companies meet, from the US to Japan.

I want to thank everyone who shared their knowledge and expertise with me during the creation of this book.

Helsinki, 19 June 2018
Tommi Vihervaara

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Introduction

1 Introduction

1.1 The background and objective of the book

Corporate collaboration in university education – what is it and what resources does it require from universities and companies? How is this kind of collaboration conducted in practice? Do the different parties benefit by collaborating? If so, how?

Today, more and more universities, including universities of applied sciences, and institutes utilise corporate collaboration as part of their basic studies. However, the perplexing thing is that while science strives to share all information freely, any knowledge of well-functioning collaborative practices between universities and companies is often retained only by each individual instructor, without being shared with other universities, faculties or the people responsible for corporate collaboration. As a result, the same mistakes are often repeated at different universities and even within the faculties of one university. This is why it is vital to collate the experiences of the various universities in Finland with corporate collaboration. This book addressed this need, as there is no point in reinventing the wheel again and again.

This book is written for people who are interested in corporate collaboration: from the managers and planners responsible for the development of their university's activities to the teachers who have just begun to plan their first classes. For those responsible for educational collaboration in companies, this book will help explain the unwritten rules of the collaboration between universities and companies.

This book focuses on corporate collaboration at the basic education level, i.e. the degree programmes that lead to bachelor's and master's degrees. Postgraduate study-level corporate collaboration for those pursuing licentiate and doctoral degrees is an interesting area as well, but we must leave something for the future. I have intentionally chosen not to include research collaboration in this book. However, I encourage all those who are interested in developing research collaboration to read this book. A look into the cooperative world between companies and universities will surely be useful for all those who are interested in the topic.

This book contains a great deal of examples of collaboration, taken from different universities. Collaboration is a field that is changing and developing constantly: some forms of cooperation may already have ended, while a batch of new ones may have sprung up before this book has even come out in print. However, this does not decrease the informational value of any current forms of collaboration. The same strengths and challenges will still be a part of organising any new forms of collaboration.

In terms of the forms of collaboration presented in this book, the main parties are the company, the university and the students.

1.2 The structure of the book

The structure of the book and its chapters follows a formula wherein I will first focus on more general-level information and then move on to more detailed matters and practical examples. The book begins with an assessment of the tasks and structures of universities and companies, and by the end of the book, you will be presented with model agreements for different forms of collaboration.

Chapter 2, **Why do universities and companies collaborate in basic education?**, and chapter 3, **When two different worlds meet**, focus on the background of educational collaboration and the structural differences between universities and companies. Chapter 4, **The university in change**, presents a quick glance into the history of how Finnish universities have developed and what their possible future could be.

Chapter 5, **Organising corporate collaboration in a universities**, and chapter 6, **Organising university collaboration in companies**, focus on the different organisational models for collaboration in both universities and companies.

The largest section of the book, chapter 7, **The most common forms of collaboration in education**, focuses on the most common models for university–corporate collaboration. The chapter also includes practical examples of the different collaboration models, all of which have been collected from different Finnish universities.

During the course of analysing these different collaboration models, it became clear that the fields of business and technology are at the forefront when it comes to the development of corporate collaboration. Most of the examples in the book

come from Aalto University. This is due to the fact that Aalto University is comprised of six different schools, all of which have been, and still are, quite active in the development of corporate collaboration. The examples presented in this book only represent a fraction of the collaboration concepts that have been developed by the many universities in Finland.

Chapter 8, **Student projects – an increasingly popular form of corporate collaboration**, is dedicated solely to student projects, as these have become more and more significant for the collaboration efforts between universities and companies.

Chapter 9, **The project that went wrong**, focuses on one failed collaborative project and the lessons that were learned from this venture. In chapter 10, **Collaborative platforms**, different platforms for mutual activities are presented through the activities of the Aalto University Factories, the Business Kitchen in Oulu, and Demola in Tampere. Of these platforms, the Aalto University Factories represent a collaborative platform that has been created by a single university, while The Business Kitchen and Demola are examples of platforms where different universities, universities of applied sciences and cities have worked together with the companies of a particular region to create new companies and develop existing ones.

Chapter 11, **Building university–corporate collaboration**, provides advice on how to create, productise and price collaborative concepts.

The final chapter of the book, chapter 12, **Collaboration agreements**, contains information on the legal agreements and other legal advice that are needed for drafting the official agreements for a collaboration. The end of the book contains examples of the typical model agreements that are used in educational collaboration.

1.3 Common terms used in the book

Universities and higher education institutions

At the moment there are 14 universities in Finland.[1] These universities conduct research and provide higher education on the bachelor's, master's and doctoral levels. In addition to traditional universities, Finland has 25 other institutions that offer higher education. These institutions are called universities of applied sciences. Even though they have the name "University" in their title, they are not considered universities according to Finnish law.[2]

In this book, the term "university" refers primarily to these 14 universities. The term "higher education institution" includes both traditional universities and universities of applied sciences.

The term "university staff" is used to refer to research, teaching and administrative staff.

Faculty

A "faculty" is the administrative unit of a university that contains the departments of any closely-related scientific fields. The title of the professor who leads the faculty is Dean. When groups of higher education institutions have been combined into larger university entities, some of them retained their previous names: for example, Aalto University has a School of Business instead of a Faculty of Business. The Aalto University School of Business is led by a dean, like the faculties. The faculty is responsible for deciding, e.g. the admission criteria for

1 Finland is going through major reforms in the higher education sector, and the number of universities might change as mergers are taking place.

2 Universities Act 558/2009.

new students, the degree requirements and the distribution of funding between the departments. The faculty is also responsible for the approval of dissertations.

Department

A "department" is the unit of a university that operates under a faculty, and it is responsible for the teaching and research of one branch of science or several related branches of science. A department is led by a head of department or supervisor, who in most universities must be a professor. It is common for one faculty or school to contain several departments. For example, the Faculty of Theology at the University of Helsinki contains the departments of systematic theology, church history, biblical studies, practical theology and the study of religions. New education collaboration projects usually require the approval of the head of the department. One department can contain one or several degree programmes or subjects.

Degree programme / programme (subject, module)

"Degree programme / programme" means the basic line of education that students follow and graduate from, e.g. the programme for marketing. A degree programme is led by a director who is usually a professor.

Company

In this book, the term "company" is used to refer to a wide group of external collaboration partners for universities. In addition to for-profit businesses, the term "company" can also mean, e.g. state and municipal public organisations as well as societies and foundations.

Student

In this book, a "student" is an undergraduate student of a university, i.e. someone who is pursuing a bachelor's or master's degree.

Business project
(= student project, student business project)

In this book, the term "business project" is used to refer to projects that students conduct for companies as part of their studies.

Corporate collaboration in education

In this book, the term "corporate collaboration in education" is used to refer to all forms of collaboration between universities and companies that involve companies and university staff, as well as students, and from which students receive credits for their degree.

2

Why do universities and companies collaborate in basic education?

2 Why do universities and companies collaborate in basic education?

2.1 The university perspective

Corporate collaboration supports societal impact

> *"- - - the universities shall - - - interact with the surrounding society and promote the social impact of university research findings and artistic activities"*
>
> Universities Act, chapter 1, section 2

Finnish universities have three tasks: 1) research, 2) teaching and 3) societal interaction, i.e. the so-called third task. When a university includes corporate collaboration in its teaching, it is implementing its teaching and societal duty tasks simultaneously. By conducting educational collaboration with companies and other partner organisations, Finnish universities support the activities of their partners and also help build the societies around them. The universities become active influencers in society by utilising the knowledge and skills of their students and researchers in order to build their surrounding social environments.

Mutual learning – teachers can also learn from corporate collaboration

University–corporate collaboration creates a route for transmitting information between participants. Universities possess the latest research information, while companies understand how this information can be implemented in practice. At its best, collaboration can act as a conduit for transmitting information that helps both parties learn. However, in a structural sense, educational collaboration is much lighter than, e.g. research collaboration, and it can be initiated more quickly. University researchers rarely have the time to delve into corporate problems, which require quick results. Instead, solving a business problem as part of an educational task is a form of collaboration where everyone can benefit.

An external partner creates pressure for both students and teachers, as even teachers are forced to confront new and unexpected situations. Corporate collaboration in education promotes dialogue and the exchange of information between the scientific and corporate world. Educational collaboration creates a common agenda and shared motivation for the task at hand. At the same time, the discussion can progress from theoretical considerations to concrete matters. Information can also be exchanged between universities and companies when they conduct research collaboration, but this exchange of information is more relaxed when it occurs in a basic studies-oriented context as part of educational collaboration. The students act as the implementers, while the teacher and company strive to support the students' work.

I am reminded of a student group that was conducting a collaborative project with a certain company. The students in the

group did not think highly of academic theories. "Our corporate partner doesn't want to know about history, they need fresh ideas," they said — and continued to ignore the help of their academic advisors.

The students began working and, after a month, presented their fresh and new model. The professor looked at the result with great interest and even praised its quality. However, the students were shocked to hear their professor tell them that he already knew this "new" framework. The same model had been presented in academic circles a decade earlier.

The "hazy" problems of companies

The traditional concept of *frontal instruction* is based on the idea that the teacher possesses the necessary information on certain subjects and then attempts to transfer this information to their students. Students are rewarded according to how closely their answers match the information presented by their teacher or textbook. This teaching method contains three undeniable benefits: 1) it is cost-effective, 2) the results are easy to evaluate and 3) the teaching is very safe, as nothing unexpected can occur.

Teaching can focus on the search for "pure" scientific truths. However, corporate collaboration brings with it problems that are not well-defined or orthodox, and the road towards their solutions can seem hazy. These problems require reflection even before one can begin to solve them. New students often think that corporate projects are like any other coursework: the problem has been provided beforehand, and the teacher knows the correct answer. The student's task is then only to find the solution that is closest to the "correct" answer that the teacher already knows.

In an actual scenario, one must often stop and ponder what the real questions are, not to mention the answers. The following figure presents two different approaches to teaching. In the traditional model, the correct answer, or the thing that is to be learned, exists before the course has even begun. All learning proceeds safely towards a result that is then evaluated according to how well it corresponds with the correct answer that was already known beforehand. However, the continual learning that occurs during corporate collaboration is much more challenging and rewarding. No one knows beforehand what the participants will learn during the project.

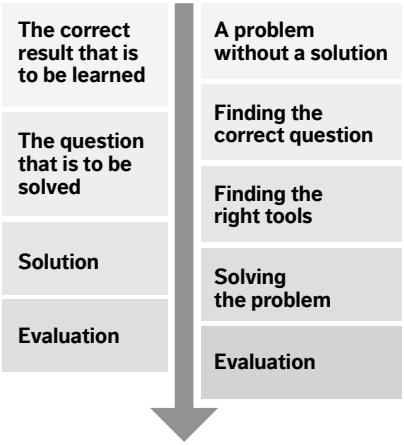

Figure 1.
The progression of different teaching methods.

A real need for results creates motivation

Could it be possible for a course to implement practically-oriented teaching without any external partners? To a certain extent, it is indeed possible. The teacher can give out tasks that

contain real, practical problems. Learning models can be adapted and the tasks can be planned in such a way that they require versatile problem-solving skills. However, these approaches still lack a certain aspect: a real need for results.

Anyone who has ever had to work on something whose results will not really be needed by anyone else knows what I am talking about. When a student knows that someone could actually use their results, it brings a whole new dimension to the work. A company that has sacrificed time and/or money for the collaboration will not disregard any results. In this way, the company brings the real world into the classroom.

2.2 The student perspective

We can begin assessing the student perspective by thinking about why students apply for universities in the first place. Their motives can be summed up in two main points:

1) An interesting field / subject;
2) The possibility of finding an interesting job in the future.

If we rule out those students who already knew that they wanted to become academic researchers since they were in kindergarten, most students see the university as a route to finding a good and well-paying job. The following paragraph contains an example of how the corporate collaboration activities of a university can, at best, serve as a direct avenue towards employment.

Recent headlines have focused extensively on corporate and societal responsibility. I remember one student who participated in two student projects that were conducted in collaboration with various companies. In the first project, we organised the construction of a well in a school yard in Burkina Faso, one

of the poorest countries in Africa. The clients of the student project included the school in question and the international finance company funding the project. Later, in another project, the students calculated how carbon dioxide emissions could be decreased with the help of ICT technology.

After the project ended, I was told that one of the students who had participated in both projects had been hired for their dream job in the Corporate Social Responsibility Department of an international commercial bank. Despite only having completed a minor in the subject, the employer appreciated the fact that the student had practical experience in the matter, and therefore, knew from experience what they were talking about. The student in question was chosen from a pool of applicants that contained people who may have had more credits and knowledge of the topic, but lacked any practical experience.

Working life needs students who can apply the knowledge that they have learned in a practical manner. The idea that one can wait until they begin their career to acquire the skills for the practical application of what they know does not meet the demands of working life today. An increasing number of jobs — especially during the initial stages of one's career — are fixed-term in nature or one-off projects. This requires that the employee is able to quickly apply their theoretical knowledge in practical situations. This is possible only if students have been exposed to the demands of working life during their studies. The collaboration between universities and the corporate world provides students with practical work experience without hindering their study progress. In fact, the situation today is quite the opposite, as many students often receive study credits for their company internships.

Empowerment

One benefit that students can acquire during their studies, but which is not known to many of those who are still applying for a place of study, is empowerment. Many university students feel that if their studies focus only on theoretical issues, they will not acquire any "real" skills. Many students also do not know how to apply the things that they have learned in practice. Corporate collaboration can empower students by helping them understand their own potential and competencies, i.e. their problem-solving skills and ability to achieve concrete results. In this way, students can become aware of how they can make a difference.

2.3 The corporate perspective

After participating in hundreds of negotiations with various companies, I can conclude that different companies have approximately five different motives for conducting educational collaboration with universities:

1) Recruitment interests;
2) The possibility of influencing the skills of future employees;
3) The good price-to-quality ratio of collaboration;
4) A fast, effortless and low-threshold form of collaboration;
5) The opportunity to receive new thoughts and ideas.

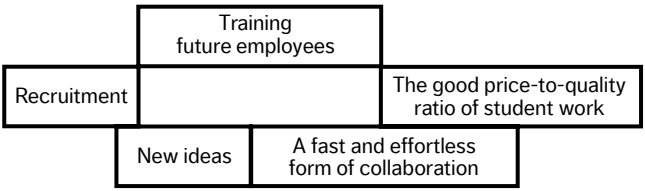

Figure 2.
Corporate motives for educational collaboration.

Recruitment begins already at the study phase

The recruitment of future employees is probably one of the most important reasons for companies to collaborate with universities. How is educational collaboration related to recruitment? Is it not enough if a company participates in a student fair with a dazzling stand and remembers to post their job opportunities on the internet?

I remember one graduating student who showed me their CV. The student in question had exceptionally good grades, work experience in the field and an approachable personality. They also had a clear vision of the company at which they wanted to work. When I asked why they wanted to work at that specific company, the student told me that the company in question had taken part in some of the university's courses. After participating in those courses, the student had become convinced that they wanted to work at that specific company. I knew that that student would receive several other job offers as well, but one company had caught their attention before the recruitment process had even really begun.

Many companies think that the situation is fine if their job advertisements receive a great deal of applicants. However,

evidence shows that the best students have already chosen their employers before any job advertisements have even been posted.

This means that the companies that rely on just job advertisements will only receive applications from students with average grades. These students will surely be good employees, but they will not necessarily be the best.

Training future employees beforehand

In addition to direct recruitment, forward-thinking companies have understood the fact that, by participating in the educational process, they can influence what skills are being taught to their future employees. When a student has graduated, it is already too late. Training employees at a later date is very expensive, so it is more cost-effective for companies to focus on collaborating with universities. Universities, on the other hand, need information on what sorts of skills are needed in working life. Hence, mutual collaboration can benefit both parties.

The good price-to-quality ratio of collaboration

When a university initiates negotiations with a company regarding a new student project, collaborative course or other kind of project, the costs of the collaboration are often handled last. However, we should not ignore the significance of money. As banal as it may seem, many promising collaborative initiatives have failed due to budgetary issues. However, we could also ask whether it is really a bad thing when a collaboration fails if the company was not willing to allocate (enough) money for it. Think about the credibility of the following statement: "This collaborative project has been very important for our company, but we are not ready to invest any time or money into it." Any com-

pany is able to allocate both time and money for the things that matter to them. The same applies, in principle, to universities as well, although their efforts can occur at a more cyclical pace. The funds for an important issue can be allotted from next year's budget — or the budget from the year after that at the latest.

At first, one might think that a company would think negatively of a university asking it for payment for something involving students. However, companies are acutely aware of the fact that if a university is willing to work in a way that benefits a company at below-market prices, it would hurt other companies that provide similar services. This, then, would constitute a form of hidden subsidy to a single company.

Budding entrepreneurs have been especially grateful for the fact that universities have begun charging some form of payment for their services. Many companies market services to other companies, who could then in turn purchase these same services from universities. It would be hard for an entrepreneur to compete against student work, since the real costs for students, such as facilities and supervision, are paid for by the state.

When a company is holding talks about engaging in student collaboration, it is good for it to know what it is buying. The goal of student work and internships is to develop the competence of students first and foremost, although they also provide companies with added value as well. In addition, student work includes the very real risk of failure. There are no guarantees for the work, as the collaboration is primarily meant to serve as a learning opportunity for students.

However, not all collaboration has to be paid for. If a case that is provided by a company is a perfect fit for the subject that is being taught, one could say that it supports teaching in its own

right. In such situations, the collaboration can be free of charge for the company. Many courses have been implemented with great success in collaboration with companies without having any money exchange hands. The significant question is, whose needs form the basis for the collaboration? It is reasonable for a company to pay for a course or student project that has been created to meet its needs. The money that a company pays can be used to maintain the activities that make it possible to organise such corporate collaboration in the first place. For universities, corporate collaboration requires more resources than regular educational activities, so it is only fair that the company benefitting from collaboration also contributes to the costs.

It could be said in several cases that from a cost-quality perspective, students represent more affordable but not free employees. The pricing models for university–corporate collaboration are presented in more detail in section 11.4.

A fast and effortless form of collaboration

If we compare educational collaboration to, e.g. university–corporate research collaboration, it is notably faster, easier and more affordable to initiate a collaborative educational effort. The initiation of a research project often requires negotiations that can last even up to a year.

Educational collaboration — e.g. visiting lectures, sample cases or student projects — often represents the first step in the creation of longer-lasting university–corporate collaboration. Through educational collaboration, a company and university can begin their concrete collaborative activities within a single year. In addition, educational collaboration does not tie up any corporate resources for a long period of time.

New ideas

In addition to recruitment opportunities and more affordable costs, the third primary motive for companies who wish to collaborate with universities is to receive new thoughts and ideas. In almost every collaborative project, the innovative and fresh attitudes of students were highlighted as one reason for the collaboration. Companies can see that students often have more open-minded attitudes and are more willing to come up with new ideas than those who, after decades of experience, are set in their attitudes and ways.

3

When two different worlds meet

3 When two different worlds meet

When the mutual activities of two parties seems challenging or rigid, the most common reason is that they do not understand one another. The activities of both parties are guided by basic assumptions that operate in the background. This chapter focuses on the fundamental differences between universities and companies.

3.1 The main tasks of universities and the interests of companies

Historically speaking, the main tasks of the university have been teaching and research. The task of a company, on the other hand, is to implement the will of its owners. Usually this increases the value of the company and, thus, the wealth of its owners as well. Companies collaborate with universities because they feel that they can benefit from the collaboration in the short or long term. At times, companies treat universities as if they were commercial service providers that the companies can use to purchase the services that they want. Even though corporate collaboration has become a part of everyday life at universities, the main task of the university is still to search for and disseminate information.

3.2 The staff structures of universities and companies

The staff at a company is usually composed of people who do very different jobs. What unites them is the fact that they all work for the (same) company. University staff can be roughly

divided into three groups: teaching and research staff, administrative and support staff, and students. From an organisational perspective, students represent the most interesting group, as they are focused on their own studies and are not part of the university's staff. Surprisingly enough, many companies commit the cardinal mistake of assuming that the relationship between the students and their university is comparable to an employment relationship. However, the students are independent actors within a university. They are free to decide how much effort they are willing to put into a corporate collaboration course, and they also own the results of their work. This means that the university does not own these results.

3.3 The organisational structures of universities and companies

People usually strive to find similarities between the organisations based on their previous experiences. For example, someone who has been involved in corporate life for a long time can easily come to think that the president or rector of a university is the same as a director or leader of a corporate group, i.e. that the deans are like the CEOs of different subsidiaries, and so forth. This comparison is logical, but it can also easily lead one astray. The nature of a scientific community includes respecting the autonomy of science and of those working in science. Scientific pursuits need to be evaluated first and foremost using scientific arguments and tools.

The university is a community of experts. Its members, and especially its professors, represent the pinnacle of their respective branches of science. If the administrative unit of a university would begin issuing orders regarding what each subject should focus on in terms of research or teaching, it would be

comparable to a situation where the President of the United States would begin issuing orders on how the reactions of a nuclear power plant should be managed. The results would likely be less than pleasant. The university's management knows this, and thus the power and responsibility for research and teaching have been left up to the faculties, departments and subjects / programmes, as they best understand the contents of their scientific fields.

Imagine a situation where the representatives of a university and a company have signed a letter of intent on a strategic partnership that would include the entire university and its faculties. Unless a separate agreement on the partnership and its significance is made with every faculty and department head, professor and sometimes even the teacher of the subject in question, then the university staff's level of commitment to the corporate collaboration effort would likely be quite low. At worst, no one outside the top management of the university would even have heard of the proposed strategic partnership. Just mentioning the partnership on some university intranet page will not ensure any commitment to the collaboration.

The key factor for successful corporate collaboration is the real commitment of those who are responsible for its practical activities. Once the university's staff has been motivated on the department level, it is easier to move the collaboration to a practical level. The people who are responsible for the research and education that is related to a topic that is of interest to a company are the best experts when it comes to the knowledge of what kind of collaboration would be possible or useful on the topic.

3.4 The time concepts of universities and companies

Most companies have existed for a period that can vary from between a few years to a few decades, while the average university may have been around for a few centuries. The concept of the university as an institution is over a thousand years old. Companies come and go, but universities are expected to continue on for years, even for decades to come. Naturally, any individual units within a university can be closed down or renewed, but the university in its entirety is quite enduring. Companies can work with very limited information, while universities strive to produce information that is as comprehensive and well-tested as possible. Universities are traditionally seen as impartial disseminators of information. Anyone can test this by watching the news on TV: yet again, the hosts choose to interview a university professor or researcher who will provide them with an impartial expert opinion on the matter at hand.

It is sometimes hard for companies to understand how strongly all educational collaboration is bound up in the contents and schedules of the university's courses. The contents of a course are defined at least six months beforehand. If a company wants to collaborate in the autumn of one school year, then the negotiations must be initiated the previous spring. Since a course usually lasts for 3–6 months, the company can expect to receive the results in about a year.

4

The university in change

4 The university in change

This chapter focuses on the changes that Finnish universities have experienced during the last 60 years.

4.1 The history of Finnish universities

1950–1990 The growth of Finnish universities

During the latter half of the 1900s, the universities in Finland grew in size and new universities were founded in various parts of the country. Research and teaching in the natural sciences increased alongside the national sciences. Corporate collaboration in education was sporadic.[3]

1990–2010 The university as a degree factory [4]

As the end of the millennium approached, Finnish universities adopted a new funding model that emphasised results and the maximisation of the number of completed master's and doctoral degrees. While the value of corporate collaboration in education is understood, the compensation models for university teachers do not yet support the implementation of educational collaboration with companies. The success story

3 Aittola & Marttila (2010)

4 The concept of the university as a degree factory has been highlighted by, e.g. Ilkka Niiniluoto, president emeritus of the University of Helsinki, in the book *Dynaaminen sivistysyliopisto* ("The Dynamic Civilising University", 2011).

of Nokia created the foundation for corporate collaboration in technology-oriented universities. The new Universities Act entered into force in 2010.

2010–2015 The universities merge

During this decade, many Finnish universities merged to become larger entities. Companies provided support for Finnish universities. Aalto University received an especially large amount of support.

2015 > A future scenario – the entrepreneurial university

Here, entrepreneurship refers to the university's ability to act as an organic part of its surrounding society as well as its desire and ability to translate societal challenges into new possibilities. The university is an active producer of information for the use of its stakeholders, and it provides its teachers, researchers, students and partners with a framework with which to create new things. The university is an active participant in networks that also include external partners, such as companies.[5 6]

4.2 The university as a degree factory – like a Soviet-era car factory

Back when the USSR still existed, it was easy to plan the production schedule of a car factory. The order for the number of cars that were to be manufactured would come from the top and people would drive them no matter the quality.

5 Clark (1998)

6 Fayolle & Redford (2014)

It may come as a surprise to many that the operating plans of Finnish universities have a lot in common with Soviet-era car factories: when one considers the five-year plans of these factories, Finnish university degree programmes can be understood as long-lasting projects (three years for a bachelor's degree and five years for a master's degree) that can be divided into parts, i.e. courses. In traditional education planning, the courses are fitted with a fixed schedule, premade materials and assignments, as well as with the sources that are to be used. This kind of degree could be compared to an assembled car. When one wants to add new parts to a degree (car), such as courses or corporate projects, their inclusion in the degree programme requires the removal of some old parts, unless space for the new parts has already been allotted beforehand.

The university as a car factory receives funding based on the completed number of cars (degrees). An approved master's degree-level car is one that contains a minimum of 300 parts, i.e. credits. These parts must belong to the assembly list (degree structure) that is used to define the car's mandatory and voluntary parts. Every extra part is also an extra expense for the factory and slows down the completion of the car (degree). If the car is not fitted with 55 parts (credits) per year, then the factory loses its financial aid from the state. The quality of the parts does not matter (much in the same way it did not matter during the Soviet era) as long as each car is fitted with 55 parts per year.

The employees of the car factory (the teaching and research staff of the university) also work at the R&D department, where new prototype car models (scientific publications) are created. Employee success is primarily measured by the number of new prototypes (publications) and their visibility in international car

magazines. The visibility that the prototypes receive in Finnish car magazines does not count for much. All of this understandably affects the product developers' willingness to work on the factory assembly line, where they have to assemble basic cars at the rate of 55 parts per year.

The situation can also be illustrated with the experiences of the teachers who are responsible for the model corporate collaboration concepts that are presented in this book. Almost without exception, every one of them told me that they would have benefitted more personally if they would have focused more on writing research articles than on developing teaching concepts.

4.3 Towards an entrepreneurial university

However, the world is changing. The Soviet Union no longer exists and Finnish universities are no longer part of a safe haven where graduates can expect to find employment irrespective of the contents of their degrees. Nowadays, car factories have to continuously create new models that better meet the needs of modern consumers.

The most important utilisers (employers) of university graduates are companies. Contemporary working life is not tied to a single country. If a company cannot find the right employees in its country of operation, then the work can be done elsewhere. This is why our factories should carefully think about how the cars (degrees) that they produce can be made to better meet the needs of companies and the continuously changing field of working life.

What do companies look for in graduates? Companies need the right kinds of drivers (graduates) who drive the right kinds of cars (degrees that are suitable for working life) for the job.

Companies are looking for the best drivers with the best cars. The competition between the factories (universities) is made even tougher by the fact that international car factories (foreign universities) are ready and willing to offer the services of their drivers and cars for the use of all companies.

The key factor for an entrepreneurial network university is its entrepreneurial spirit. When the right kind of atmosphere is present, starting new things and risk-taking are seen as something to be applauded. The teachers, students and external partners of the university form a network where new ideas are created, refined and implemented.

Practical experiments in, e.g. the United States, have shown that an entrepreneurial spirit should not be reserved for just technologically-oriented or large universities. It is possible to create an entrepreneurial university in fields that are part of the humanities and that do not have any established networks with corporate life. Any university, faculty or department can become entrepreneurial by utilising its creativity and the collaboration between the different branches of science. An entrepreneurial spirit does not depend on just culture alone, as it is also affected by organisational structures and operational processes. We need new operational models that are based on soft bureaucracy. An entrepreneurial network university is a hybrid organisation that can achieve its objectives through creativity and networking, even in situations where state funding is becoming increasingly scarce.[7]

7 Clark (1998)

The key factors for an entrepreneurial university[8]

1. A strengthened university management group

The management group must be able to combine traditional academic values with new management models.

2. Widened collaboration with the university's external stakeholders

These stakeholders include companies, communities and public organisations.

3. A versatile financial basis

The university's financial basis must be versatile so that it is able to react to any changes in funding opportunities.

4. An academic foundation that promotes entrepreneurship

The basic units of teaching and research form the bedrock of academia. To enact any changes in the university, new values and organisational models must be integrated into this academic bedrock.

5. An integrated entrepreneurial culture

An entrepreneurial culture does not require that everyone in the university start their own companies, but rather that the culture of the university accepts and encourages change and the creation of new things.[9]

8 Clark (1998)
9 Fayolle & Redford (2014)

5
Organising corporate collaboration in universities

5 Organising corporate collaboration in universities

This chapter focuses on the organisation of corporate collaboration activities within a single university. The focus is on educational collaboration, but the operating models that are presented in this chapter are largely applicable to research collaboration as well.

When a company wants to initiate discussions on establishing a collaborative relationship with a university, it is not always clear whom they should be negotiating with. An example of a common type of university hierarchy is presented below. Every university usually contains the same basic units: faculties, departments and subjects/programmes. Sometimes these units have different names: for example, Aalto University has "Schools" instead of "Faculties". Thus, Aalto has a "School of Business" instead of a "Faculty of Business". In this figure, a "separate function" is a function that is organisationally separate from basic teaching and research. Separate functions are usually included within a university's administrative department.

The company must understand whom they are talking to and how the person in question is connected to the university. Companies should know that, for example, a Vice President of Education or a Dean does not directly supervise the people who actually conduct the teaching.

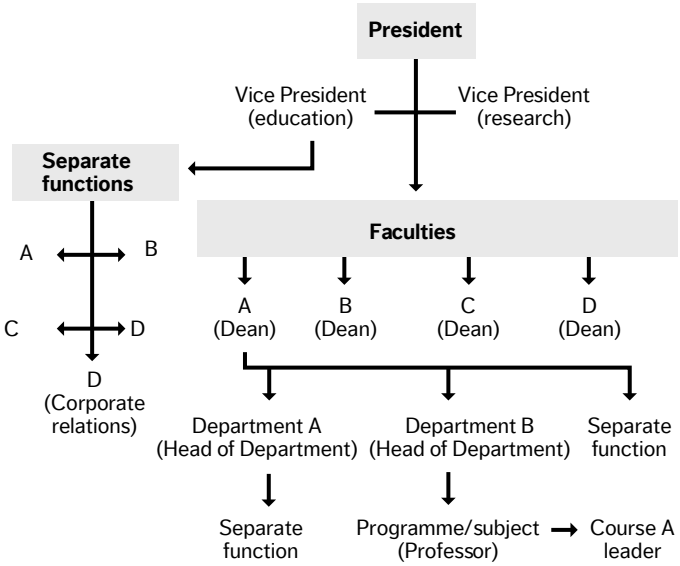

Figure 3.
The organisational structure of a university.

5.1 The structure of a university – like the European Union

When we assess the structure of a university, it can perhaps best be compared to the European Union. In this example, the faculties are akin to EU member states. Some matters are decided on the EU level, while others are left to each individual state. The member states exert a fairly high degree of autonomy in their own affairs. Any company that is collaborating with a university should not assume that it is sufficient enough to collaborate with only the highest level (i.e. the level of the President or Rector) of that university. This would be the same as if the President of the United States'

relationship with the member states of the EU by only meeting with the European Commission. As with the member states of the EU, there are differences between the units of a university. Some act exactly in the manner that their upper management wants them to, while others act more independently.

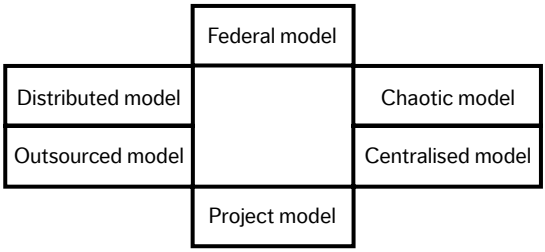

Figure 4.
Organisational models for corporate–university collaboration.

Universities, however, should not leave this relationship-building effort in the hands of companies alone. The members of the university's community should actively help companies understand how the university works and whom they should get in touch with. It is unrealistic to expect a company to understand the hierarchy of any given university and to go through its organisational charts to find potential people that they could contact. This is why every university needs — and I know what a pain it is to suggest increasing the headcount of any administrative department — employees who know the university's structure and are motivated to build the connections between corporate and university actors. Universities need people who see corporate collaboration as a possibility for their own universities as well.

Next, I will present the most common organisational models for the collaboration between companies and universities.

5.2 The distributed collaboration model

The distributed model is often nicknamed "the professor-centric operating model", and it represents the most common form of corporate collaboration in universities. With the distributed model, the corporate collaboration that is conducted by professors and teachers is based on their own needs and starting points. The distributed model emphasises the teacher's power, responsibility and personal relationships. These factors may have contributed to the increase in the model's popularity among research staff.

Especially in technologically-oriented fields, many professors have, over the years, formed well-established relationships with companies in their own particular (business) fields. People know each other and can communicate with ease. When there are no unnecessary intermediaries who slow things down, all discussion can immediately focus on content. The teacher and corporate representative can agree on the means of collaboration directly with one another. The distributed model is based on strong personal relationships. From the perspective of university management, the model is quite effortless. It does not need to be built or maintained in any way. One could well ask whether the behaviours present in the distributed model are the consequence of a concrete decision or just a safe explanation for a situation that no one wants to interfere with.

From the corporate perspective, the problem with the distributed model is finding the right person in a given university. The company must know exactly which programme, subject or individual course the proposed collaboration should be connected to. Professors in a certain field often have very little interest in promoting any activity that does not fall within their area of

responsibility. More often than not, they are not even aware of what happens in any other department except their own, even if the neighbouring department is located just on the other side of their office wall. In a worst-case scenario, the company will have to comb through a university's staff roster on a person-to-person basis before they can find the right person to work with. This is unnecessarily arduous, especially since a larger university can play host to several thousand researchers at any one time. The operating model also discourages the search for new collaborative possibilities. All collaboration is done between parties who have worked together before, and the collaboration that has been conducted in previous years continues in the same way as before. The collaboration between a company and university is also not documented in a systematic fashion in this model, resulting in a situation where no one has a clear overall picture of what the collaboration entails in its entirety. This also means that any possible synergies are usually left unutilised.

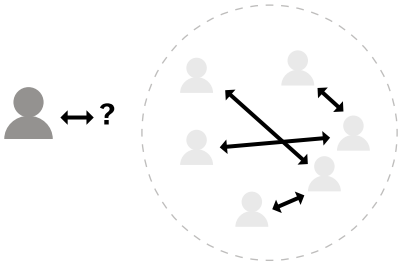

Figure 5.
The distributed collaboration model.

A similar problem can be found on the corporate side. If only one person is responsible for maintaining all information and connections, there is a very great risk that this information can be lost.

The following example from the corporate world illustrates the danger that the centralisation of information can bring with it. Even though the example does not focus on university collaboration, it demonstrates how risky it is to have only one person who is responsible for all contact networks.

During the beginning stage of my career, I worked at a research and consulting firm that employed around 30 people. As the youngest researcher/consultant, I was tasked with assessing the results of previous projects. During one staff meeting, I asked where the information on the firm's projects and clients was located. There was a moment of silence, and then one person said: "I think that the database is sitting at the end of the table." Suddenly, all eyes were on the CEO who was sitting at the end of the table. He smiled and calmly replied: "I guess that's so, but I know what you must be thinking. I could be run over by a train tomorrow, which would mean that all my information would go with me. We have to do something about it. Let's get back to this after the Christmas holidays." We never got the chance. The 2004 Christmas season arrived, and with it the catastrophic tsunami in Thailand, a popular holiday destination for Finns. The CEO was among those who were killed.

Even if we leave out natural disasters and car crashes, it is very unlikely that the same people will remain in the employ of the same organisation indefinitely. If any university–corporate collaboration is left up to one single employee, the collaboration will end immediately when that particular person leaves the organisation. Their possible successor will often have to start from scratch, since all the information on corporate contacts will disappear with the previous employee. The question of disappearing personal networks has become very topical in both companies and universities, as the baby boomer generation is currently in the process of retiring from the workforce. We can assume that the situation will only worsen in the coming years.

The distributed collaboration model		
	Strengths	**Challenges**
University	+ The operating model is strongly connected to the people who are actually responsible for teaching and research. + No unnecessary intermediaries. + Based on personal relationships. + Effortless to create, forms by itself.	- All activities are the responsibility of one person. - When assessed beyond the confines of a single department, the entirety of the corporate collaboration is left unclear. - Professors and other research staff have no interest in developing any corporate collaboration that extends beyond their own special fields. - Old collaborative partnerships are emphasised and no strong motivation for finding new corporate contacts exists. - Information is not transferred. - Any change in staff creates a significant risk that the collaboration will end. - Professors are already busy.
Companies	+ A well-functioning form of collaboration if / when the right contact is found.	- The details of the collaboration may become the knowledge of only a few persons. - There is a risk that the collaboration will be left in the hands of only a few persons. If the persons in question are replaced in the company or university, the collaboration will cease to exist. - The collaboration depends on the personal contacts that have been created by the company.

5.3 The centralised collaboration model

In the *centralised model*, all corporate–university collaboration is the responsibility of a single actor. In this situation, the university creates a unit that is responsible for all corporate collaboration. The company, in turn, appoints an employee who is responsible for any collaborative activities with universities. This form of centralisation can also be seen in the adoption of a research or customer information database. The clearest benefit of centralisation is that it makes it easy to manage the overall collaborative situation. The company and university can manage every aspect of the collaboration and better focus their resources.

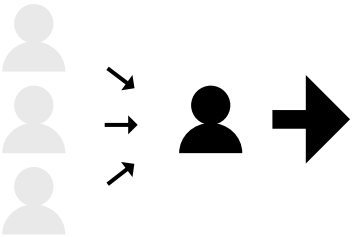

Figure 6.

The centralised collaboration model.

However, the centralised model also brings with it the so-called *Gatekeeper* problem. When all forms of collaboration must go through a single party, the party in question becomes a gatekeeper of sorts, one whose plate will soon become full. Inevitably, instead of being a facilitator, the gatekeeper will become a bottleneck. In addition, the gatekeeper would need to possess a tremendous amount of information on various fields to be able to make any decisions. As a consequence, gatekeepers must construct their own extensive organisation to coordinate all collaboration. It rarely makes sense to massively increase a university's

administration. A purely centralised model where all forms of collaboration must go through one party has not been adopted by any Finnish university. It is also difficult to find any company that utilises a controlled but flexible centralised operating model. However, one should not throw the baby out with the bathwater. The centralised model possesses clear benefits that should not be ignored so easily. There have been efforts to utilise the benefits of the centralised model with the *federal model*.

The centralised collaboration model

	Strenghts	Challenges
University	+ It is easier to understand and manage the entirety of the university–corporate collaboration.	- The party who is responsible for coordinating corporate–university collaboration can become a bottleneck.
Companies	+ Companies have one channel through which to negotiate any collaboration.	- The collaboration must always proceed in a specific way. - Spontaneous collaboration models that have been created in collaboration with a single teacher cannot be implemented without the approval of the coordinating party for corporate collaboration.

5.4 The chaotic collaboration model

"In Italy, for thirty years under the Borgias, they had warfare, terror, murder and bloodshed, but they produced Michelangelo, Leonardo da Vinci and the Renaissance. In Switzerland, they had brotherly love, they had five hundred years of democracy and peace – and what did that produce?
The cuckoo clock."

Orson Welles in Carol Reed's film *The Third Man*

It probably comes as no surprise that the *chaotic collaboration model* is not on any organisation's wish list. Usually, the chaotic model emerges by itself during great organisational changes, e.g. when different universities and higher education institutions are merged together. When their activities become more established, the chaos abates — or so one hopes.

The chaotic model is characterised by vaguely defined goals and responsibilities, or goals and responsibilities that have not been defined at all. In universities, teaching (and research) are the responsibility of the departments and programmes. Almost 90 per cent of the labour resources devoted to teaching and research are always also connected to some department. Traditionally, departments have been granted a great deal of autonomy for the planning and organisation of their activities. If any new university–corporate collaboration is to be created, usually the first step is to receive the approval and support of the department head before initiating the collaboration. A sure-fire way to cause chaos is if a university appoints a

development director who does not have a strong mandate or any personal links to the departments where the teaching is actually conducted. If these links are missing, the results will inevitably be chaotic. While some discussions may be held with companies, the university will lack the methods for transferring any discussions to a more practical level. When a sales-oriented person with a fancy title visits a company, the company will assume that the person in question has also been granted the practical authority and responsibility for making decisions on the topics that they are there to discuss. In actuality, the person is more of a messenger and connector who does not possess any real negotiating mandate as such. The person may often have the indirect authority to push things forward, but to initiate any collaboration, the project in question must also be advocated by the people (teachers / researchers) who would be responsible for the corporate collaboration in practice.

However, chaos is not always necessarily a bad thing. Any organisation that has existed for a long time can become set in its ways and used to utilising only certain operating models. Even when any efficiency-improving activities are enacted, the organisation may still continue to tread the same path. A moment of chaos may provide the opportunity to introduce new thinking patterns and operating models. Identifying and understanding any moments of chaos can create opportunities for utilising the situation at hand. It may be beneficial to try to limit any ensuing chaos to only a single activity or time period. In this way, the organisation will not have to waste its resources on controlling a phenomenon that cannot really be controlled in any case. The worst kind of situation is when there is chaos, but no one is willing to identify or admit it.

The chaotic collaboration model		
	Strengths	**Challenges**
University	+ If the chaos is identified and contained, it can facilitate change in an organisation. + Accepting the chaos and containing it both from a locational and timing standpoint can help save resources.	- The division of responsibilities in an organisation is unclear. - Trying to operate in a chaotic situation requires a lot of energy from staff.
Companies	+ No strengths.	- Makes it more difficult to find any responsible person from the university to negotiate with.

5.5 The outsourced collaboration model

The university can also outsource the organisation of its corporate collaboration. This means letting an external party handle the university's corporate contacts and provide the university's teachers with readymade activity packages. Usually, the collaborative activities of a university are the responsibility of some party that is close to the university. This kind of party can, e.g. be a company that is owned by the university or a student organisation. The outsourcing of collaboration contains many strengths as well as weaknesses. An external party may be freer to act since it is not subject to the hierarchical limits of the university. It can focus purely on finding corporate contacts by any means necessary. External actors can also profit from their activities and use the money to develop these activities in the long run. Meanwhile, the university's teachers can focus on teaching without having to deal with any practical issues.

The weaknesses of this operating model stem from the same source as does its strengths. Since the activities take place outside the university, any collaboration networks and collaborative competence are also disconnected from the university. The situation might also create conflicts of interest. An external actor may steer the educational collaboration in a direction that is not in line with the teacher's interests. Corporate collaboration usually involves three parties, each with their own interests, but the external actor increases the number of participants to four: the company, the university, the students and the external actor. The situation also contains moral issues as well, since the external actor is allowed to profit from the work that is done by the university and its students.

Case

The outsourcing of the career services of Tampere University of Technology to a private employment agency

At the beginning of the 1990s, Tampere University of Technology decided to outsource its student career guidance services. The idea behind this decision was that the career opportunities of students are not part of the university's core tasks and that the outsourcing of such tasks would also result in cost savings.

The basis for this decision was the idea that the university would purchase these working life services from a private employment agency. The idea was that an agency that specialises in employment services could produce these services for students in a more effective manner and at a higher quality than the university could by itself. The university first chose *Fast Oy* as its employment agency partner, and then *Adecco Finland Oy*.

The employment agency placed two of its employees at the campus of Tampere University of Technology and provided the following services for students:

- Guidance that supported matters related to working life and job-hunting;
- The arrangement of jobseeker events;
- Job brokerage: permanent, summer, project and master's thesis-related work as well as internships and gigs;
- Matching students with the employment agency's client companies.

The university compensated the employment agency for its two campus employees for a total that corresponded roughly to the employment costs of one employee. This meant that the university received two experts who were well-versed in the working life affairs of students on its campus for the price of one. The employment agency, on the other hand, received the exceptional opportunity to interview students and match them with the needs of their corporate clients. The employment agency acted as both a matchmaker and as an agency for hiring temporary workers. In

addition, the company in question was responsible for arranging working life events for students as well as CV clinics, and it was also responsible for distributing the employment book to engineering students.

The effectiveness of this collaboration is illustrated by the fact that, even though the campus employees were officially employed by the employment agency, the university's representatives were also allowed to participate in their appointment process. And since the employment agency had an international background, it could also provide students with an exceptionally wide network of different employers. The employment agency was especially motivated to ensure that the recruitments would actually occur, since it also received a commission from its client companies every time they were matched with the right student.

However, the world changed and became more international. Nowadays, there are many different employment agencies in Finland. In addition, many employers like to recruit students directly without any intermediaries. Students can and should utilise the services of many employment agencies simultaneously.

In this new situation, it became more and more difficult for the university to favour one single employment agency over another. There was also a fear that the employment agency would primarily match the university's students with its own client companies if the pool of potential employees was not large enough. This meant that the agency could turn from being an employment facilitator into a bottleneck.

The university was also eager to widen its contacts with working life to develop its educational activities. The university felt the need to integrate a more working life-oriented touch as part of its educational activities in a more concrete way. This was difficult to achieve when the working life services of the university were the responsibility of an external employment agency. Tampere University of Technology also decided to join the Finnish *Aarresaari* employment network that had been formed by Finnish universities, which meant that an employment agency could not function as the university's representative in the network.

The outsourcing of the career services of Tampere University of Technology to a private employment agency

	Strengths	Challenges
University	+ An employment agency can act as a real matchmaker for students (by interviewing and choosing the most suitable candidates). + An employment agency has many networks with other companies. + The employees of an employment agency are professionals when it comes to recruitment and guidance.	- As an external party to the university, an employment agency will find it hard to act within the university to develop the working life orientation of the university's education and research activities. - An employment agency may not be motivated to support the employment of any other students than the very best ones. - The risk exists that the employment agency will only match employees with its client companies first and foremost.
Employment agency	+ Receives an advantage when it comes to the placement and recruitment of students.	- The employees of an employment agency may face a difficult situation: whose benefits are they promoting, the company's, the university's or the students'?
Other companies	+ Receive a professional channel for the recruitment of students.	- When an employment agency receives an advantage in the placement of students, it becomes harder for companies to utilise any other parties for the recruitment of that university's students.

5.6 The project model, i.e. the "one timer"

A fairly common model for university–corporate collaboration is to create a development project. This sort of project model, or "one timer", possesses the following characteristics:

a) The project only lasts for a limited time;

b) The project contains predefined goals;

c) The project receives funding from outside the university's basic funding structure. Possible funders include, e.g. the EU, the Ministry of Education and Culture, TEKES, different cities and various funds.

Of course, it is also possible to implement the activities within a project that is funded by the university itself. Even in this case, though, the project will only continue for a limited time.

The greatest challenge for the project model is how its activities can be integrated with those of the entire university so that the activities can continue even after the project ends. So long as the project is active, everything will be fine. But after the project ends, it is far too common for the situation to return back to where it was before the project started. In the project model, the university is only slightly committed to the continuous development of the activity. Since the funding comes from an external party, it is all too easy for a university to create a short-term project that deals with matters that should, in fact, be part of the university's usual, long-term development activities.

When the project's employees are employed from within the university, there is also the danger that they will use the project's funding to focus on their own tasks, which are often not part of the project. To prevent this from occurring, some public project

The project model		
	Strengths	**Challenges**
University	+ Clear objectives and schedules. + The activities usually receive support from outside the university's basic funding structure.	- The integration of the activities into the university's basic activities is not automatic. - The activities can easily come to a halt after the external funding stops. - Possible bureaucracy. - The project is used to patch any holes in the university's funding. - The constraints that are placed by public funding.
Companies	+ It is easy for a company to participate in a project that runs for a limited time and has specific goals.	- A project can have several corporate partners, each with their own objectives. - The constraints that are placed by public funding.

funders require strict working time and expense accounting as well as approval procedures. As a consequence, a significant part of the project employees' working time is spent on filling in paperwork. The project model can be used in educational collaboration when, e.g. initiating a new student project course or internship programme. The challenge is in ensuring the position of the activities that have been initiated with the help of the project so that they can continue even after the project ends.

5.7 The federal model

The centralisation of corporate collaboration into the hands of a single party at a university has been a matter of discussion at both universities and companies for a long while now. This kind of one-stop principle has usually been at the top of every company's wish list. As mentioned before, a fully centralised system is not used by any Finnish university. It is also unlikely that it would make sense to create one. However, partial centralisation does bring with it some clear benefits.

One example of a partially centralised system is the *Corporate Relations* unit located at Aalto University's School of Business. The *Corporate Relations* unit, originally named "Corporate Services", was formed in 2001 — the same year that the corporate partner programme was initiated. Over time, its activities have been expanded to include, e.g. student projects and recruitment collaboration. The concept has proven to be useful and has shown that it is possible to conduct corporate collaboration in a university in at least a partially centralised way.

During the academic year of 2014–2015, the *Corporate Relations* unit was merged with the School of Business' alumni activities and career services. At the same time, the unit's headcount

increased from four to seven, and the new unit was named "External Relations". Over the years, the people who were responsible for corporate collaboration had noticed that many corporate collaborators were asking the same questions about university collaboration and recruitment. To enable new synergies, it was decided that the different areas of corporate collaboration needed to be entrusted to a single unit. Since the now-unified unit is also responsible for promoting the working life skills of students (CVs, job-seeking training, mentoring, etc.), it was also able to improve its links to student life. The unit's alumni activities, on the other hand, help strengthen the links between the graduates of the School of Business, who are now part of corporate life, and their alma mater.

The current *External Relations* unit is responsible for coordinating the following activities, all under the same roof:

Corporate relations

- The initial discussion partner for all corporate collaboration;
- The partner programme for the creation, development and maintenance of long-term collaborative relationships;
- Customised student business projects: after receiving a company's assignment, the Corporate Relations unit assembles a customised student group that is led by a researcher from the School. The group can include students from one or several subjects. Since Aalto University focuses on several branches of science, in addition to business students, the group can also include technology and/or design students;
- Sponsored halls: a company can have a lecture hall be named after it in the School of Business;

Career Services

- Recruitment collaboration: the distribution of work and internship adverts and thesis assignments, recruitment fairs, company presentation events, internship grant programmes;
- The development of the working life skills of students: CVs, job search training;

Alumni activities

- Alumni activities and events;
- Alumni–student mentoring programme;
- Alumni-oriented communication;
- The coordination of general alumni activities;

Fundraising (from 2015 onwards)

- The creation of partnerships;
- Building and promoting a culture of giving in the long run;
- Fundraising campaigns.

In this section, when I discuss the Corporate Relations unit of the School of Business at Aalto University, I am referring to the part of the External Relations unit that focuses on the management of corporate relations and that has over a decade's worth of experience in the field.

The Corporate Relations unit does not prevent the School's staff from collaborating directly with a company. On the contrary, this kind of collaboration is even encouraged. However, if a company is interested in a more extensive form of collaboration, one that goes beyond the confines of a single subject, the School can provide them with a negotiation partner whose interests

include considering collaborative activities that happen on a broader scale. The company can talk to just one party when it is interested in research or educational collaboration, corporate visibility, student recruitment or student projects. Of course, the Corporate Relations unit cannot pretend to know the contents of all the research projects that are being conducted at the different departments of the School. However, once it has understood what a company needs, the Corporate Relations unit can connect the company with the right researchers and corporate representatives and then take a step back.

Even though the unit is operating at a steady pace today, it initially got off to a rough start. When the unit was formed 15 years ago, corporate collaboration was not a given at what was then called the Helsinki School of Economics. Some professors engaged in a great deal of corporate collaboration, but for most, this kind of collaboration was almost unheard of.

Some researchers and professors protested the idea that an external unit (the Corporate Relations unit) would be given the authority to deal with the School's corporate relations. However, the matter was not put up to a general vote, as the then-president of the School, Eero Kasanen, decided on the matter. [10]

10 Pöykkö, E & Åberg, V (2010)

The Corporate Relations unit and the partner programme that was closely connected to it were only successfully realised due to the following three factors:

1) Professors were still allowed to maintain their own mutual collaborative relationships with companies in the manner that they wanted. The Corporate Relations unit is not a supervisory or managerial body.

2) The School's management strongly supported the idea.

3) The unit was able to fund itself.

The activities of the Corporate Relations unit are financed with external corporate funding, so the unit does not have an adverse effect on the School of Business's basic funding budget. The self-sufficiency of the unit has helped alleviate any internal opposition and has also provided the unit with the freedom to develop its own activities. However, the fact that it receives external funding presents some issues as well. Since its activities are financed with funds that are collected from its partners and the companies that have purchased student projects, its activities are tightly connected to its funders. It is impossible for the unit to begin creating any large new projects since its staff resources are bound by its current activities.

Case

An example of a centralised method: Customised business projects

Instead of having every department at the Aalto University School of Business create its own student project courses, the School of Business decided to centralise the matter. The *Student Business Projects concept* was born, and later renamed "Customised Student Business Projects".

The initiative for a new project can come directly from a company or via the School's researchers. In such cases where the initiative has been provided by a company, a project expert or coordinator from *Customised Student Business Projects* negotiates with the company about the preliminary contents of the project and then recruits both the student group who will implement the project and the academic researcher who will be responsible for guiding the group from within the School.

A student project can also be initiated on the basis of discussions between a researcher and company in question. In this case, the researcher invites Customised Student Business Projects to handle the administrative and practical aspects of the project, such as student recruitment, any agreements and so forth. The researcher can focus on just leading the group without having to spend time on any practical matters. Since all collaborative activities have been centralised on the basis of the one-stop principle, companies can collaborate with the School quite effortlessly. A company can discuss its staff development project one day and its cost evaluation project the next, all with the same party.

After three Finnish higher education institutions were merged to become Aalto University, the activities expanded and the same concept can now be used to implement projects that focus on technology and design. There has also been an increase in the number of so-

Customised business projects		
	Strengths	**Challenges**
University	+ Projects can be organised and coordinated from a single place. + Not every department is required to maintain its own separate project activities. + It is easy to organise projects that include different subjects / branches of science. + The activity pays for itself. + *Customised Student Business Projects* takes care of all practical matters (no effort on the part of the researcher who is responsible for guiding the student group).	- Since the activity is not the responsibility of any single department, it is also not under the "protection" of any particular department. - Its activities do not scale well (the customised projects concept does not work well with projects that involve several dozen students). - Since the students are chosen for the projects based on their academic performance and interviews, it can be hard to become involved if a student does not have anything to show academically or in their CV.
Companies	+ Flexibility: the contents of the project and the composition of the student group can be managed on a case-by-case basis. + The one-stop principle. + Excellent price-to-quality ratio. + Speed: projects can be initiated throughout the year, and the average duration of one project is 3 months. + The minimisation of risk: the project is not initiated if a sufficient number of students are not found.	- Costs (companies that want a personally-customised research / development project for free are not part of the target group of the concept). - The concept is best suited for projects that involve 2–4 students (other concepts exist for larger student groups).

called Aalto Projects where the student group is comprised of students from different fields.

The CRM system as part of the centralisation of collaboration

One important factor in the centralised model is the centralised collection of information that is related to the collaboration between universities and companies. The established term for these kinds of systems is *Customer Relationship Management System*, or *CRM system*. In an optimal situation, the CRM system functions by providing a list of all the projects that the company or person in question has conducted in collaboration with the university when you search for the company or person by entering their name in the search field. The system also provides information on persons who have collaborated with the company in question on behalf of the university.

With the help of the CRM system, the university can identify its key partners and the fields where it conducts its collaborations. The university is also able to identify any changes in the field of corporate collaboration and react to them faster. From the perspective of the university's central organisation and the sharing of information between teachers, the implementation of a CRM system can introduce significant benefits. However, when it comes to utilising the system, the hardest part may be in trying to get people to actively use it.

6

Organising university collaboration in companies

6 Organising university collaboration in companies

Universities are not the only organisations that like to tinker with centralised and decentralised organisational models. Companies also come face to face with the same issues on their side as well. Small and medium-sized companies rarely need to coordinate their university collaboration, since all of their information is shared internally and the decisions on collaborations are made by management. However, the situation is not quite as clear when it comes to larger companies. Several different units of the same company may be collaborating with the same university without the matter ever coming to the attention of the other units or management.

Several companies utilise the decentralised operating model, which was already assessed in the previous chapter from the university perspective. Individual units decide on whether or not to collaborate with a university based on their own interests. Operating in this way brings with it a significant practical benefit: when the decision on the collaboration is up to the person who is responsible for the work itself, there is more support for the activity. In addition, the results of the collaboration are more likely to be implemented in practice. Of course, the decentralised model has its challenges as well. Only a select few larger companies know how many research collaboration projects, student projects, visiting lectures, internships or master's theses they have completed in collaboration with a given university during the year. Since most companies do not have a clear

idea of what their situation is at a given moment, it is also hard for them to see the entire collaborative field or the value of collaborating with universities. Their activities are managed by gut feeling, and their resources are utilised in an inefficient manner. Most collaborative projects are initiated based on the things that the company has heard through the grapevine and via its previous contacts. Any pertinent information on collaborative possibilities will not necessarily reach the people in the company that would benefit most from the opportunities that a university could provide. Some employees may think that they know the university well, but they are thinking of the place where they studied 15 years ago. Many things have changed since then.

6.1 The responsible party for university collaboration

Larger companies usually have an appointed person who is responsible for their corporate collaboration. The choice of the employee in question is quite significant for the success of any collaboration. Their status and duties in the company have a significant effect on the direction the collaboration with the university takes. Here are a few examples of the different responsible persons in a company and their assumed focus areas:

- **The communications director** – How can the university community support our internal and external communications?
- **The marketing director** – How can we utilise the university in the marketing of our corporate image?
- **The development director** – How can the collaboration support the company's new development projects?
- **HR director** – How can the collaboration support the recruitment of new employees?

The problem is that each party will be tempted to see the university through the lens of their respective work area. The HR director or manager is not necessarily familiar with the needs that are related to the company's research. Another important question is whose budget will be used to pay for the direct costs of the collaboration. Let's assume that the partnership with the university will cost a little over ten thousand euros per year. From the perspective of the total budget of a large company, this is not a very significant sum, but for a smaller unit, this sort of expenditure could take a hefty bite out of its budget.

The key questions in the organisation of university collaboration

- Are the unit and responsible person truly interested in the collaboration?
- Can the responsible person utilise the entire spectrum of the university collaboration, from research to recruitment?
- How is the university collaboration related to the responsible person's other duties?
- Have the costs of the collaboration been spread out within the company so that they do not place too much pressure on the budget of a single unit?
- Are the matters that are related to research and corporate development the responsibility of the unit responsible for university collaboration?
- Are the matters that are related to the company's brand and recruitment of new employees the responsibility of the unit responsible for university collaboration?

The quality of the collaboration strongly depends on what the company is aiming to achieve with the university collaboration and how closely the collaboration is linked to the company's

strategy. In an optimal situation, the steering group responsible for university collaboration will include representatives from every operation of the company that is affected by the collaboration, and the group should also have the support of the company's upper management.

6.2 Collaborating with small companies

When people talk about corporate collaboration, the discussion is usually dominated by larger companies. These companies usually have a person who is responsible for managing all collaborations. However, most people usually forget the fact that large and medium-sized enterprises only account for 1.1 per cent of the corporate field in Finland. This means that small and microenterprises (companies with 1–46 employees) account for no less than 98.9 per cent of the companies in Finland. These companies also employ almost 50 per cent of the workforce in Finland.[11] This means that by discounting small companies, Finnish universities may well be ignoring half of their potential partners.

Collaboration with smaller companies is challenging due to the fact that the communication between smaller companies and universities is very sporadic and need-oriented in nature. A smaller company will only collaborate with a university if it can provide the company with an immediate benefit. In a company that only employs a few people, every employee's working time is spent almost solely on running the business. On the other hand, the representatives of a university cannot visit every small company. In addition, smaller companies do not have much

11 Statistics of the Federation of Finnish Enterprises 2015. These statistics are based on information that was gathered in 2013.

in the way of financial resources. However, when the needs of smaller companies and universities do meet, a smaller company can be much more intensively involved in the collaboration than a larger company. With a small company, students are in direct contact with the company's upper management. The work that students do can also have an immediate effect on the company's decision-making.

When trying to get in touch with small companies, it pays to collaborate with local entrepreneurial organisations, startup accelerators and other similar actors. These organisations know the local field of the entrepreneurs and are usually motivated to help create new collaborative efforts.

The following example describes how a university can successfully collaborate with small companies and startups.

Case

An example of collaborating with small companies: the Capstone course

The Capstone course is a course where students who are nearing the end of their studies can test their skills by solving real cases. The students enrolled in the course can have different majors and come from different faculties.

The Aalto University School of Business arranged the Capstone course for the first time in 2014, where students conducted a large-scale, real-life business project in teams of 4–5. The exceptional thing about the course was that it was done in collaboration with three parties.

The implementers of the collaboration were as follows:

- **Aalto University:** responsible for the organisation and teaching of the course;
- **Start-Up Center:**[12] helped with contacting startup companies;
- **Companies:** introduced real business problems that needed to be solved.

In 2014, the course included ten companies, each of which presented a business case that the student groups needed to solve.

The idea of the Capstone course is to have the students represent their different subjects on their teams. Each team identified and analysed the problem faced by their

12 The Aalto Start-Up Center is a business accelerator that operates within Aalto University but is separate from its teaching activities. The Center acts as a business accelerator for budding companies and expertly combines the fields of business, technology and design.

Case

case company and solved it independently. At the ending seminar, the teams presented their results to the other students in the course.

Since almost every company in the 2014 course came through the Start-Up Center, the Center thought that the course was an excellent tool for supporting growth entrepreneurs. Marika Paakkala, the project director for the Start-Up Center, noted that the companies also had high expectations for the final reports made by the students, since the companies intended to utilise the reports in their decision-making.

The companies and students collaborated together in the problem identification process. The company cases focused on, e.g. the creation of marketing plans, market area expansion and starting up entirely new business activities.

"*I provided the students with several different cases from a very large group, from 'develop a new concept' to more concrete topics like 'create a marketing plan'. We then mutually chose the creation of a concrete marketing plan as their case."*
CEO **Kimmo Koivisto**, Tellyo.

"We arranged a mutual kick-off meeting at the Aalto Start-Up Center, where we went through the background information that was related to the problem, the possible approaches, as well as further context. I thought that it was important that the students had the freedom to define the specific problem area that they wanted to focus on."
CEO & Founder
Mervi Pohjoisaho, Blue Berry Communications & IR Oy.

"The identification of the problem and case happened naturally on the basis of our brief and through mutual sparring."
CEO & Co-Founder **Markku Patronen**, Reader Stage. [13]

The entrepreneurs praised the collaboration effort with the students. There were a few meetings that focused on the scope and goals of the project. Many of the entrepreneurs noted that the observations that came up during the meetings provided them with valuable information even during the course. In addition, the spontaneous and independent working methods of the students and their commitment to the project were commended by the entrepreneurs — skills that are needed in working life as well.

"Collaborating with startup companies is also a great way for us students to understand the everyday life of an entrepreneur in a concrete way", noted Johanna Heikkinen, who participated in the course.

"During the course, we were able to match the skills of the students and the needs of the growth companies in a way that benefitted both parties, which is also the operating principle of the Start-Up Center. The Capstone course is one concrete example of this", noted course leader **Christa Uusi-Rauva**.

13 These comments are based on an article on the course that was written by Terhi Ollikainen on 26 November 2014.

The Capstone course		
University	+ Students at the final stages of their studies can apply their skills in a real-life situation. + Students from different subjects can collaborate with one another during the course.	- Finding suitable case companies.
Companies	+ The opportunity to utilise the skills of students who are close to graduating. + The company receives a lot of feedback for its business idea in a short amount of time. + The opportunity to test a business idea in a safe way. Students are not funders. + The collaboration is free for the company. + Working together with students provides new energy. + The collaboration forces the company to reflect on its own activities.	- Requires openness from the company. - The company must be available for the kick-off event to describe its business activities and ideas. - The business idea must be presented in such a way that the students are able to "buy it" after a brief presentation. - The company must be able to concretely define the assignment that is to be presented to the students. - The students are collaborating in order to learn; they do not work at the company 24 hours per day. - The company's idea is not automatically included in the course. - The company must be able to be open about its business idea. - The success of the collaboration is largely dependent on the activeness of the company itself.

7

The most common forms of collaboration in education

7 The most common forms of collaboration in education

This chapter focuses on the most common forms of collaboration for universities and their external actors. Many universities have conducted educational collaboration with external parties for a long while now. Much in the same way, many companies have a long history of educational collaboration with certain universities.

7.1 Visiting lectures

The visiting lecture is one of the oldest and most traditional forms of collaboration. A company representative comes and tells students about the subject at hand from the perspective of the company. The visiting lecture is an expert visit, where the company representative is expected to act as an expert and not as a salesperson. Of course, the visitor should provide a brief presentation on their background and that of their company.

It is common practice for most universities that, if the visiting lecturer is acting as a representative of their company, then the visiting lecturer will not be paid a lecturer's fee. However, if they are acting in the role of an external expert, then a fee can be paid. It can sometimes be difficult to draw the boundaries between these two roles.

A well-executed visiting lecture is an effective way of clarifying the image of a company, while a badly executed lecture poses an image risk.

Common instructions for visiting lecturers

- Contact the course leader well in advance. The course schedule is usually locked in place around six months before the course begins.
- Before the visit, discuss with the course leader what you will talk about with the students. You will also receive valuable information on what the students have already been taught. The responsible teacher for the course will ultimately decide the topics for the visiting lectures.
- Be concrete. Students crave concreteness first and foremost when it comes to a company visit — information on how the contents of the course can be integrated in practice.

What company representatives should avoid

- Arriving too late;
- Praising one's own company and its products › students are allergic to salespeople;
- Any uncritical praise of some specific technology or other related matter;
- Arrogance;
- A lack of language skills;
- Too much faith in the functionality of any particular presentation technology: if the whole presentation is dependent on a data projector and/or internet connection, then the visitor will be in a tough situation if the projector or internet connection does not work.

7.2 Company visits

A company visit, or excursion, is pretty much the opposite of a visiting lecture. In a company visit, the company representative does not come to the students, but instead the students visit the company's on-site operations. The same instructions apply to a company visit as with a visiting lecture — with the difference being that the students are now the guests, and therefore, it is natural for the host of the visit to present the activities of their company. Company visits are usually the result of an initiative of the teacher responsible for the course, and the teacher should "brief" the company on how to meet the students.

When you are planning a course visit to a company, provide the following details to the company well ahead of time:

- What subject / course the students are studying;
- What the students already know about the topic;
- What would be especially interesting for them to see and hear.

For students, the company visit provides a valuable chance to see how theory is applied in practice. At the same time, they have the opportunity to receive practical information on the kinds of jobs that they might apply for after graduating. The company, on the other hand, has the valuable chance to meet its future employees and consumers. Remember that student recruitment begins at the study phase. One cannot imprint a company's corporate brand into the minds of students in one go, as it is a process that happens gradually through many steps. A company visit is one of the most effortless ways to achieve this goal.

The following course example shows how companies can participate in education in many different ways.

Case

An example of collaboration: the basic and intermediate courses in computer graphics

The basic and intermediary courses in computer graphics focus on techniques that help create the special effects for, e.g. computer games and movies. The current contents of the courses have been planned by Aalto University Assistant Professor of Computer Science and Engineering Jaakko Lehtinen. He brought the contents of the basic course from MIT, where he taught computer graphics.[14] The teaching of the courses emphasises programming. The basic course has approximately 130 participants, while the intermediary course has 20–30 participants.

Every year, the basic course in computer graphics includes six companies from the field, which encourage students in the following ways:

Rewarding separate course works

In the *basic course*, students complete six different exercises. The student with the best grade from each exercise can choose a book that is related to the topic of the course, which has been donated by a collaborating company. Usually the company will also invite the student on a company visit.

Rewarding the best student of the entire course

The student with the best overall score across every exercise is rewarded with a graphics processor that has been donated by a company.

14 The Massachusetts Institute of Technology (MIT) is one of the world's most prestigious universities. Many consider MIT the best university of technology in the world.

A private company meeting for the best students

In addition to the rewards that have been mentioned above, the 5–6 best students from the course will have a chance to participate in a private meeting with a top company in the Finnish games industry.

Gala

At the end of the course, one collaboration company will sponsor a sauna evening gala for the students of the course, where they will get to see the best student works from the course.

In the intermediary course, a top company in the field chooses the best student work

Unlike in the basic course, the *intermediary course* in computer graphics ends with a competition where the judge is a representative from a top international company in the field. In the competition, the students submit their work for evaluation and the judge provides their review of the winning work in writing and/or virtually — via the internet — for example from the United States or New Zealand. When the winning student begins applying for jobs in the future, he/she will have an evaluation of their skills that has been provided by a top international company. The best work is also rewarded with a top-of-the-line graphics processor that has been donated by another company.

The works of the students have been reviewed by leading companies in the field, such as Weta Digital, DreamWorks and Pixar Animation Studios.

Basic and intermediate courses in computer graphics

	Strengths	Challenges
University	+ The students have the opportunity to get to know the companies in the field in an exceptionally encouraging manner. + The students have the opportunity to network. + According to student feedback, the courses are extremely popular.	- Many of the students are so excited that they spend much more time on the computer graphics courses than on regular courses. This can also slow down their performance in other courses and postpone their graduation. - It can be challenging to find corporate contacts at first if the course leader does not have any existing contacts with the companies in the field.
Companies	+ Can market themselves in a focused manner. + Get to know the future stars of the field. + Student recruitment opportunities. + The collaborative effort does not require any complex agreements from the company, only just the will to be a part of the course.	- The possibility for companies to participate in the computer graphics courses has not been marketed outside the university, so many companies are not aware of the possibility. New companies are accepted for the courses, however.

7.3 Case-based teaching

Cases have become an ever more common form of teaching. In this book, the word "case" refers to the so-called official teaching cases, where the teaching contents are subject to certain standards. The most prestigious cases are published in the case series publications that are produced by Harvard Business School and the Berkeley Haas School of Business. If a researcher or research group can manage to get their case published in these series, it will provide its authors with the same kind of respect that a publication in a prestigious journal of the field would.

In popular discourse, the word case has been generalised to not only mean case publications but also almost any limited case that is to be solved or that aims to demonstrate the subject at hand in practice. As a form of teaching, case-based teaching means that students receive a real — or at least lifelike — case that they need to solve. The case can be something that has been assessed and solved previously, but it can also be fresh and open, meaning that the right/best solution is still unknown to the teacher as well. For example, in law limited cases are often used to demonstrate the things that are being taught.

Most cases are often limited enough in scope that the students are able to solve them during a lecture or at least during the course. Even though a case does not need to be real, the value of real cases continues to rise.

For companies, cases provide a good opportunity to utilise the skills and creativity of students. Especially a case that is solved during a course (1–3 months) can produce new insights to questions that a company may consider particularly pressing or timely. A case that is attached to a visiting lecture is a great way

for demonstrating an issue or concept. If and when a company wants their company to stick in the minds of the students, a case is a good way to stand out. For a company, case collaboration is usually free. In return for not costing anything, the corporate representatives are expected to actively comment on the solutions that the students come up with so that students can receive the maximum learning benefit from solving the case.

A checklist for company representatives

- Be in direct contact with the teacher of the course;
- Write the case that is to be solved with great care. The case can also be presented with a series of slides or a video;
- Provide students with background material;
- Be an active participant in commenting on the solutions.

Case competitions

In case competitions, student groups solve problems in a short amount of time. Usually the participants are allowed to gather their group freely from among the students in their school and then enter the competition. The competitions teach students to think and act fast. The student group usually only has a few hours or a day to solve the case. Case competitions are also arranged internationally, where the best teams from each country go head to head.

7.4 The internship

The internship is one of the most common methods for providing students with work experience. The goal of an internship is to allow a student to experience working life in a concrete way and test their skills in a real working environment.

Unfortunately, in some cases a company will only be interested in hiring interns due to the fact that they do not command the same wage as a permanent employee.

Paid internships

The intern is there first and foremost to learn. Their employer must therefore ensure that the intern receives enough guidance for their duties. The employer must also remember that despite the fact that the student has been hired as an intern, it does not mean that they can automatically be paid less than permanent employees — at least in a situation where their tasks are largely the same as those of regular employees. On the other hand, if a company takes adequate care in guiding interns and provides them with interesting tasks that allow them to put their skills to the test, then the internship will be positive one, even if the intern's pay is lower than what is specified in the collective agreement for the field.

Would you happen to have an arts student who could paint my summer cottage on an internship? Unfortunately, I can't pay for the work, but the student would receive valuable real-life work experience.

As a general rule of thumb, the pay for interns is determined on the basis of the number of credits that they have accumulated. For more information on credit-based internship remuneration, ask the labour union representing the field in question.

Unpaid internships

If the employer does not pay for the internship, then the internship is more introductory in nature and will not include any difficult tasks that need to be completed independently. The internship includes an intern supervisor who has been appointed by the company to guide interns in their work tasks and provide them with instructions on how to conduct oneself in the workplace.

The internship as part of a degree

Many educational institutions provide the opportunity to include the internship as part of one's degree. This means that students can earn credits with their internship. At many institutions, an internship is a mandatory part of one's studies. At universities, common practices can vary between faculties and fields. Since students are awarded credits for completing the internship, it is important that they also learn something during their work experience. Usually, in order to earn credits, students must create some sort of report or learning diary on their work. The credits that they receive for completing the internship is a matter that is handled between the university and each student. Credits cannot be used to replace the salary paid by the company.

Subsidised internships

A subsidised internship is an internship where the university supports the salary costs of the student. These sorts of internships can include, e.g. internships that are conducted at a governmental institution or within a university. In certain situations, the university can also subsidise an internship that is done at a company.

Next, I will present two examples of different internships. *The internship programme for foreign students* is one example of a subsidised internship, while the Aalto University School of Chemical Technology's so-called *Summer work for credits* programme is an example of a traditional type of internship that is paid for by a company.

Case

An example of a subsidised internship: the internship programme for foreign students at small companies

In 2014, the Aalto University School of Business created *the internship programme for foreign students at small companies*. The programme provides special funding for the internships completed by foreign students at small Finnish companies and organisations that have under 50 employees. It is especially important for international students to gain work experience and find contacts, as they typically have less connections with working life than Finnish students.

The internship is a valuable experience that benefits both students and employers. At best, the intern can provide their workplace with new insights and ideas. It is also a good idea for small companies to hire international students as interns, as it helps the companies become more global.

Foreign students often have a keen interest in applying for jobs or internships at Finnish companies, but the problem is that there are a lack of both internships and jobs. Students apply almost exclusively to larger or medium-sized companies. As I pointed out previously, these companies represent only around one per cent of all Finnish companies. The majority (98.9%) of Finnish companies are small or microenterprises. However, these companies do not have much contact with international students, and the problem is mutual. Companies are unable — or even unwilling due to, e.g. a lack of language proficiency — to hire international students, and the students do not know how to apply for an internship at small companies.

Case

The requirements of the internship programme for foreign students

- The employer must be a company or organisation that has under 50 employees.
- The internship must be related to the student's field, and the student should learn new things during the internship.
- The duration of the internship must be at least three months while working full time.
- The company must pay a salary to the student. The company will receive part of its costs back in the form of an internship subsidy.

The company receives an internship subsidy of 600 euros per month for hiring an international student. The maximum subsidy amount for a three-month internship is 1,800 euros. Any salary and employer costs that exceed this amount must be paid by the company. Please note: the subsidy cannot be applied for beforehand, and it is paid back retroactively. When the student and company have reached a consensus on the contents of the internship, the parties must confirm their eligibility for the subsidy with the School of Business. The subsidy is paid to the company after the internship has ended.

The internship programme for foreign students at small companies

	Strengths	Challenges
University	+ International students receive work experience, learn about Finnish working life practices and have the opportunity to broaden their professional network in Finland.	- Finding internships that do not require any Finnish proficiency. - The companies and students must find one another. - The costs of the internship subsidy to the university. - Organising and coordinating the activities and instructing the students.
Companies	+ The company receives the opportunity to utilise the cultural knowledge, networks and language skills of the international student. + The company can have part of its salary costs refunded via the internship subsidy.	- Students usually have poor Finnish language skills. - Students are not familiar with Finnish working life practices. - Students lack professional networks in Finland.

Case

An example of an internship: Summer work for credits

The School of Chemical Technology at Aalto University had a tricky problem: the new requirements for the accelerated graduation of students required that bachelor's-level students need to complete at least 55 credits per year. These requirements could not be fulfilled with respect to the teaching component of the field without compromising the overall quality of the education. How could the School find more study time for the students? The answer: summer work. The department was not willing to hand out credits for just any kind summer work, at least not without a learning requirement. The goal was to have the students evaluate their employer from an organisational perspective during the summer work as well as evaluate their own learning and role in the work community.

The study-related aspect of the internship consists of two courses:

- **Learning at work**
  (5 credits)
  – Taken during the first year.
- **Operating in a work environment**
  (5 credits)
  – Taken during the second year.

The courses include working in small groups, writing a learning diary, the internship itself, analysing the work organisation and reflecting on one's own work.

The conversion of summer work into an internship that awards credits created an opportunity for employers to further utilise the skills of students without any added costs. The students report to both the university and employer on a topic that is specified by the company.

Summer work for credits		
	Strengths	**Challenges**
University	+ Students can learn and receive credits even during the summertime. + The collaboration between universities and companies becomes closer.	- Students search for the summer work / internship themselves. The university must arrange an internal unpaid student project for students who cannot find an internship at a company. - Since the academic year ends on 30 July, the students who work until the end of August must write their report in the middle of their internship.
Companies	+ Companies receive external reflection on the topic of their choice without any added costs. + Companies get to better know the skills of students and how they develop. + Makes it easier to arrange future recruitments.	- The greatest challenge is in finding an internship advisor and / or contact person for the student within the company who is ready to select the topic that the student will write their report on and to comment on the student's report.

Here are a few examples of possible topics:

- How are the company's values reflected in the everyday lives of its employees?
- The development of occupational safety
- How have environmental question been taken into account at the company?
- The ease of use of some device/technology
- The work satisfaction of the staff
- The activities of the organisation from the perspective of an employee
- The effects of internationalisation
- Own topic _____

7.5 Competitions

In a competition, students create preliminary works either by themselves or in teams on a topic that is provided by a company. The company chooses the best entry. Based on its own decision, it then either adopts the winning work as-is or else the winning student receives the opportunity to finalise the work for the company. In either case, the student receives a reward for her/his work.

Competitions represent a form of collaboration that provides a company with the opportunity to receive several proposals that present new ideas. For example, competitions are great for generating architectural or visual design ideas.

As part of university collaboration, competitions can be roughly divided into two groups: course-related competitions and open competitions.

Course-related competitions

Course-related competitions are often divided into two parts. In the first part, the company presents the students in a course with an assignment that might contain, e.g. a problem that is related to visual design, programming or even business. During the course, the students solve the problem either by themselves or in groups, and by the end of the course they will have produced several preliminary works or solutions. This means that the company receives several draft solutions for their problem/assignment. The company chooses the best student work. For the rest, the course ends there. But the winning student or group will continue on to finish developing their work. For the

company, the first phase of the competition can be either paid or unpaid, depending on the situation.

In the second part, the company pays a royalty for the work of the winning student(s). Every student in the course is awarded credits for completing the first phase, and the winning group can also receive credits for finalising the work.

Open competitions

An open competition is not related to any specific course or programme. The competition can be, e.g. open to every student in a university or particular subject. Since the competition is not tied to any specific course, the students who participate in it will not automatically receive credits for their work. However, different universities may award credits for open competitions as well. The university's representatives will not guide the works of the students who participate in the competition in any way, but they can participate in the arrangement of the competition and in the evaluation of the students' entries.

Case

An example of an open competition: The Brand / Visual Communication Design Competition (Aalto University)

The Media Department of Aalto University has a great deal of experience in arranging and implementing various competitions that are conducted in collaboration with different companies. The company contacts the department, and the department then refers the company to the producer who is responsible for collaborations (the organiser). Together with the producer, the company assesses the various forms for collaboration and selects the most suitable one. The best time for announcing a competition is at the beginning of autumn, since most of the department's students will be back at the university then.

The following table provides an analysis of Aalto University's Brand / Visual Communication Design Competition. It is a so-called partially open competition aimed at the university's graphic design majors

The Brand / Visual Communication Design Competition

	Strengths	Challenges
University	+ The channels and best practices for internal communication within the department already exist. + The competition is not tied to any course schedules, although the best time for announcing a competition is at the beginning of autumn. + The university does not need to guide the competition entries.	- It requires a good organiser who knows how the university functions and who can organise the competition. - Drafting the competition rules requires time and understanding. - The basic rules and model agreements must be prepared in advance. - Ensuring the impartial judging process.
Companies	+ The company can quickly receive different ideas that it would not be able to find so easily and affordably on the open market. + The development of the company's visual culture from unexpected angles.	- The company must have its graphic design guidelines/visual communication materials in order. - The university cannot guarantee the number of participating students (there may be less entrants than what is desired). - The quality of the student entries can vary – there is no quality guarantee.

7.6 Theses

Student theses, i.e. final projects (various master's theses), represent one of the oldest and best-functioning forms of collaboration. Final projects provide companies with the opportunity to commission limited projects as student works as well as the chance to meet potential new employees. According to a survey by the Academic Engineers and Architects in Finland (TEK), almost 50 per cent of students in the field receive their first job through their master's thesis work.[15]

However, it is important for both students and companies to understand that the final project that is commissioned by a company is also an academic thesis. A student's thesis advisor can easily decide on how to evaluate a work that has been commissioned by a company as well. The problems related to the matter can be illustrated via the following example.

A few years back, one student had made an agreement regarding their master's thesis work with a particular company. When the student presented the work to his/her academic advisor, the advisor noted that the topic in question was not appropriate for thesis work. By being overly independent, the student's actions had put her/him in a tricky situation. The academic advisor of the thesis had the authority to approve or reject the topic of the master's thesis, irrespective of the wishes of the student or company. The company on the other hand had the right to decide what they would be willing to pay for. If a compromise could not have been reached, the student would have had to make a choice: would he/she want to produce an unpaid academic thesis or a paid report for the company, one which would not be

15 Hyötynen & Kanervo (2015)

approved as the student's final project? The company can, in practice, actively help guide the student, but the grading of the work is up to the academic advisor alone.

The quality of the thesis is supervised by a top researcher in the field.

The problem that I just described could have been easily avoided if the student would have approved the master's thesis topic with her/his advisor before signing any binding agreements with the company. This approach is also sensible since students can receive valuable advice for the contents of their work from their advisor, which in turn also benefits the company. When the quality of the work is supervised by a researcher who is also one of the leading experts in the field, it provides added value for the company as well. A low-quality thesis does not represent anyone's interests – not the university's, the company's or the student's.

The price of a thesis for a company

The remuneration that students receives for their thesis is a matter that is left completely up to the company and the students.

One of the most common questions that both companies and students ask is how much a thesis should cost. The amount that is paid is affected by the field of study, the field of the company, the contents of the thesis and the students' competence as well as their study and work experience. Every field usually has its own payment recommendation for theses. Labour unions and associations are usually able to provide the most accurate information for each field. The usual cost of most theses is between 4,000 and 10,000 euros. If the company hires the thesis worker as a salaried employee, then the salary is usually around €2,000–2,600 per month.

The different forms of payment for a thesis

Many different payment practices exist for theses. The following list presents the most common ones.

Creating a thesis under an employment relationship

Many of the theses that are created for companies are created while students are employed by a company. This represents a salaried relationship wherein the students sign an employment contract that is subject to the usual practices of salaried work. If a particular student already is an employee of the company, it is possible to skip the creation of a separate employment contract, as the employer can simply grant the student the right to use part of their working time for the creation of their final project.

Strengths

+ The student and thesis are directly connected to the company's operations.

+ The thesis worker's work input can be used for the other activities of the company in addition to just his/her thesis work.

+ The company can agree with the student on how the copyrights of the work will be shared.

Challenges

- Taxation and employer responsibilities, salary-related expenses.

- The student must be hired as a company employee, which is not always possible (e.g. when layoff-related negotiations are taking place).

Paying for a thesis with a grant or stipend

In several universities, the commissioner of the thesis has the opportunity to pay the student fee as a grant or stipend through the university or its foundation.[16] The difference between a grant and a stipend is that the grant is paid to the recipient during the work, while a stipend is paid only after the work has been completed. Of these, the grant is more commonly used. A stipend might be more appropriate with, e.g. a competition, or when rewarding a particularly exceptional thesis.

The grant practice differs from all other thesis reward practices in the sense that the company's grant donation must be gratuitous in nature. This means that the company will not have any right to dictate the contents of the thesis.

With the grant practice, the commissioner of the thesis donates the desired sum to the university or its foundation, after which the university or foundation provides the grant to the student. This is inexpensive taxation-wise for both the student and company. The company will not need to hire the student and will also avoid any additional labour costs. In addition, the donation is tax-deductible. The company can define the purpose of its donation on a general level in the deed of the donation. One example is "the internationalisation factors of Finnish growth companies".

16 Different universities can have different practices for grants and stipends, some of which may differ from the ones presented in this book. If you are interested in grant-related practices, it is best to get in touch directly with the university or university foundation and confirm its current practices.

Since the donation by the company is gratuitous in nature, the company does not have an employer's right to dictate the contents of the work, but, on the other hand, the company also does not have the obligations of an employer. Since the student and company are not in an employment relationship, no employment contract is signed.

Several universities or higher education institution foundations pay the final instalment only after the thesis has been approved. The grant that the student receives is income that is not taxed. The foundation may deduct a certain share (e.g. 20 %) of the sum that has been donated by the company for itself. The foundation's share is also used to support the university's other research and teaching activities.

An example of a possible practice for grants

1) A company decides to support the research of a certain field with 8,000 euros.
2) The company signs a deed of donation to the foundation and transfers the sum to the foundation's account.
3) The student applies for a grant and receives a sum of 6,400 euros (8,000 -20%).
4) The grant is paid to the student in several instalments, the last of which the student receives only after the thesis has been approved.

Strengths

+ Simple and does not involve much bureaucracy at all.

+ No additional employer costs;

+ The company can deduct the donation in its taxation;

+ No need to hire the student;

+ No need for employment contracts;

+ The grant is tax-free income for the student. (*Please note*: the grant still counts as income when considering the income limits of the financial aid for Finnish students.)

Challenges

- A grant donation is gratuitous in nature, i.e. the company does not have the employer's right to dictate the work of the student who receives the grant. The guidance of the work is the responsibility of the academic advisor of the thesis.

- The company will receive no copyrights to the thesis.

Creating a thesis as university research

In certain fields, it is possible for students to create their final project while in an employment relationship with their university. In such a situation, the university negotiates the costs with the company. It is important for companies to understand that in this situation, the company is not purchasing the work effort of a single student, but an entire research project that includes the work guidance that is provided by an advisor with a doctoral degree and the use of a facility (e.g. a laboratory). In this case, the university is a contractual partner of the company and responsible for the delivery of the work. When it comes to the costs, a thesis that is done as university research is comparable to an inexpensive research project.

Strengths

+ The university is responsible for the work, student recruitment and the obligations that are related to the employment relationship.

+ The significant advisory input of a professor;

+ The use of university resources;

+ The company acts as a customer when it purchases a completed thesis from the university;

+ Even if the student who is creating the thesis were to fall ill, the university is responsible for delivering the work to the company.

Challenges

- The costs of the work are usually greater than with the other options.

Remuneration as work compensation in a commissioner–supplier relationship

When the thesis remuneration is paid as work compensation, the company is purchasing a completed work from the person who will receive the remuneration. The commissioner ensures via its instructions that the final result will corresponds to the commission. Receiving the work compensation does not require the student to register with the tax administration's registers or the commercial register, and the student does not need to have a business ID. With work compensation, the employer does not need to pay the employer's social security contributions, but a withholding tax must be delivered if the student who will receive the work compensation is not in the preliminary tax withholding register. In addition to the work compensation, the commissioner must also pay for the costs that are incurred during the research process. These may include, e.g. material or printing costs, postage costs or travel expenses.

The agreement can include a clause stating that the contents of the thesis will be defined in more detail in the research plan.

Strengths

+ No employer side costs or other employer obligations.

Challenges

- The company cannot utilise the student's work input in anything other than the thesis.

- The tax authorities may interpret the situation differently afterwards and conclude that the work was conducted in a salaried employment relationship and then demand that the employer pay the employer's side costs.

The tax authorities evaluate whether the work was conducted in an employment or commissioner–supplier relationship on a case-by-case basis. The evaluation contains several different criteria that are also emphasised differently. When conducting the evaluation, each case is considered separately. Here is part of the Finnish Tax Administration's own instructions: "Overall, it can be said that the existence of a management and supervisory right as well as the payment of instalments that are part of a typical employment relationship, such as employee benefits and welfare benefits, as well as the payment of overtime pay and sickness and holiday benefits can strongly demonstrate that an employment relationship has been formed. If a management and supervisory right cannot be clearly demonstrated and the work is done in the performing party's own facilities, and especially if the performing party of the work has invested their own capital into, e.g. tools, then no employment relationship is formed." For more information, see the website of the Finnish Tax Administration. [17]

The publicity of theses and the concealment practices of corporate information are discussed in further detail in section 12.2, *The intellectual property rights of student works.*

17 www.vero.fi

Theses in a nutshell

- Research / commissioned work that is done by a student who is about to graduate;
- An established and safe form of collaboration;
- The company that commissions the work has several options for paying the salary / remuneration;
- Finding the suitable student requires effort on the company's behalf;
- Since the thesis is made by just one student, it usually focuses on just one perspective / solution — no information exchange with different students (from different fields).

7.7 Corporate-driven courses

A corporate-driven course refers to a course that is either built around a single company or where one company is responsible for (almost) all of the teaching in the course. In practice, a corporate-driven course can be realised as, e.g. a student project, case-based teaching or a competition. Usually a university course can involve several student projects or mini-cases, but the main point is that a corporate-driven course is conducted with just one company.

A corporate-driven course requires that the company is ready to allocate a great deal of time — and sometimes even money — to the course. In return, the company is allowed to influence the contents of the entire course. The contents of corporate-driven courses are always planned together with the teachers of the university. In this way, the study contents and the company's needs can be combined.

Case

An example of a corporate-driven course: The "labour law in practice" course

The teaching at the University of Helsinki's Faculty of Law — especially at the master's degree level — is mostly based on reading exam books. An exception to these textbook exam courses are the so-called practical courses. The faculty has a long-standing tradition of inviting law firm representatives to teach an entire course. The *Labour law in practice* course has received excellent feedback and is very popular among students.

In the course, labour law is taught in a practical manner with actual cases. The only prerequisite for the course is that the students complete the *Basics of labour law* study module before the Labour law in practice course begins.

The significant point is that experts from the law firm Castrén & Snellman are responsible for handling all of the teaching in the course. Instead of a traditional exam, the students complete the course by writing a learning diary that is approved by a university representative. The course allows students to see what every day life at a law office is like, how real court cases are resolved and what labour law cases have been arising of late. For the law firm, the course is an excellent opportunity for the firm to present itself as a leading expert in the field and as a network with potential employees. Since Castrén & Snellman has been responsible for the teaching of the course for four years in a row, the university and the company have formed a relationship that is based on mutual trust. The contents of the course have also been created with the possibility in mind that, should the university or company coordinator change at some point, their successor will be able to handle organising the course without any extra trouble. When one company is solely responsible for the entire course, it can coordinate the contents of the teaching better than if the teaching responsibilities had been divided among several companies. Since many other companies have also expressed a keen interest in arranging the course, Castrén & Snellman has been incentivised to ensure that its teaching is top-quality.

The "labour law in practice" course		
	Strengths	**Challenges**
University	+ A company can tell about the practical issues that are related to the problems it presents. + University researchers save time when a company is responsible for the teaching. + The teachers do not need to be paid. + The teacher-in-charge can be switched without any issues.	- The university is tied to the company that arranges the teaching. The schedules and contents need to take into account the company's needs. - When the course is being planned, the contents must be reviewed together with the company. - Is the teaching that is provided by a company objective enough?
Companies	+ The company can present itself as an expert in the field in the eyes of the students. + Course collaboration creates a positive corporate image, which then promotes future recruitment efforts. (There is great competition for the most talented employees.) + Law firms allocate part of their working time for pro bono activities. Teaching a course is a good way of carrying one's societal responsibility by sharing one's skills with younger generations.	- The company must commit itself to the teaching schedule for the course. - Teaching takes away some of the working time of the company's employees, and this time is not billable. - Creating the teaching materials takes time, especially when a company is arranging a course for the first time. - Any teaching that is handled badly poses an image risk.

7.8 Student projects

In a student project, a group of student implements a company's assignment with the support of an academic advisor. This activity makes it possible to combine the competencies of students from different fields and a multidisciplinary approach. Today, most of the work that is conducted in working life is done in teams that contain experts from different fields. Student projects represent the same type of action (cf. a thesis that is done by just one person). In student projects, the students get to implement the ideas they have learned in practice as part of a team while they are still in the middle of their studies. The company in turn receives a fresh and versatile vision from the group. Assembling a similar team on the open market would be very expensive for the company.

The following chapter discusses the different areas of student projects in more detail.

8

Student projects – an increasingly popular form of corporate collaboration

8 Student projects – an increasingly popular form of corporate collaboration

A project is a temporary endeavour undertaken to create a unique product, service or result.

The definition of a project.
Project Management Institute, Inc.[18]

Currently, *projects* serve as the most central form of collaboration for the *research collaboration* between universities and companies.

In addition to research collaboration, projects are also becoming one of the most important forms of *educational collaboration*. In a corporate working group that was arranged for the creation of this book, both corporate and other stakeholder representatives chose *student projects* as the most interesting form of collaboration. What makes projects so enticing for companies?

For companies, a student project is an endeavour that is easy to understand from a time and cost perspective. Projects make it possible for companies to utilise the different skills of several students for a common goal. Projects also provide companies with a safe way of observing what students are able to do. It is quite common for companies to hire one or several persons after a successful student project.

At Aalto University alone, hundreds of corporate-sponsored student project groups are assembled every year.

At Aalto University alone, several hundred corporate-sponsored student project groups are assembled every year to solve corporate problems and assignments. Even though it is not the goal of the student projects to generate a profit, they still bring in millions of euros in revenue to Aalto University every year. Most of the money that companies pay for student projects are used to maintain and develop various project concepts.

In student projects, the student group solves the assignment that has been provided by a company. Usually the group is guided by an academic advisor, who can provide the group with the latest knowledge of their scientific field. Meanwhile, the company appoints a contact person for the group who provides information and guidance.

18 The Project Management Institute (PMI) is a non-profit organisation in the United States that aims to promote project management and define project standards.

The DIKW hierarchy

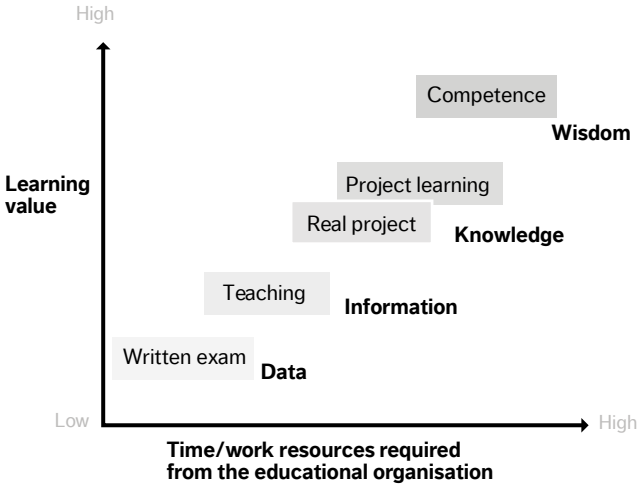

Figure 7.
The levels and learning of data, information, knowledge and wisdom.

The following figure presents the relationships between data, information, knowledge and wisdom. *Data* represents the lowest level of this hierarchy. Even if the teaching of a subject focused purely on maximising the amount of data that students should absorb, the students could still only read a certain number of books. The grade of their degree would then be based solely on how well they are able to remember the pages that they have read.

Information, on the other hand, is more refined than raw data, as the data has been provided with a direction and purpose. The teacher will have thought through beforehand what she/he feels are the most relevant matters that are to be taught about the topic in question. When information ascends to the level of

knowledge, this means that the user can use the information in practice. At this stage, real projects become a very useful form of teaching. Learning to apply knowledge without a purpose or meaning is very difficult and not very motivating. The need to solve a real problem provides better motivation for students.

The final level is represented by wisdom. Every one of us has had the privilege of meeting wise people during our lives. They may not possess a limitless amount of knowledge, but they are able to see what is essential and can reach the best conclusions even in situations where only a limited amount of information is available. These kinds of people are highly sought after both in business life as well as in other areas of society. Forging a sword requires testing the iron with fire, and a student's journey towards wisdom requires testing their knowledge with real projects.

> *"Blessed are those who find wisdom, those who gain understanding, for she is more profitable than silver and yields better returns than gold. She is more precious than rubies; nothing you desire can compare with her. Long life is in her right hand; in her left hand are riches and honor. Her ways are pleasant ways, and all her paths are peace. She is a tree of life to those who take hold of her; those who hold her fast will be blessed."*
>
> The Bible, Proverbs 3: 13–18.

8.1 Student projects provide added value to companies

Every time a company is considering implementing a student project, it basically has four options to choose from:

1) Do the work by itself;
2) Hire an external party to do the work;
3) Commission a student project;
4) Leave the project undone.

Over the years, I have organised hundreds of student projects, and I have also discussed the value that a student project can create when compared to professional activities with countless companies. The following descriptions are based on these discussions.

The following figures depict both student projects and professional research and consulting services. As we can see, a professional consultant can create value for their customer in a very short period of time. A research and/or consultancy firm can find out the answer that their customer wants during the first meeting, since the firm has implemented similar projects before. In addition, a commercial company has employee and information resources at its disposal that can be activated immediately. This means that they can get results in a very short amount of time. After this, the price-to-quality ratio of professional projects slows down. Practical research work is not all that different from the activities of student groups. These kinds of firms often leave these tasks in the hands of their junior employees, whose competence is not that much better than that of recent graduates. By the end of the project, the experts' skills are highlighted yet again, since it is time for them to draw up their conclusions.

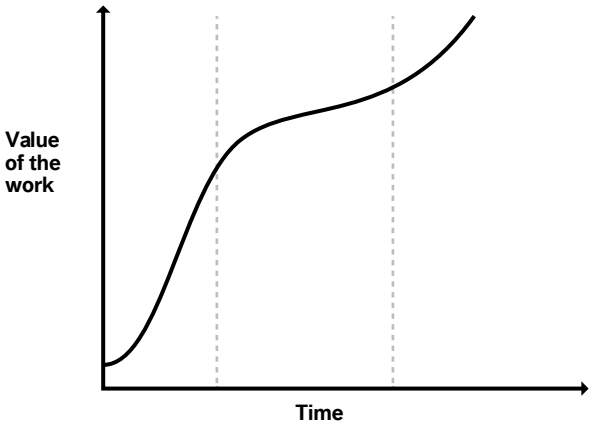

Figure 8.
Research or consulting firm.

It takes more time for student projects to get off the ground. Since the project is also a teaching course, its initiation often follows the course schedule of the university. It also takes some time to form the student groups. In addition, one must also remember that the students are not yet professionals in their respective fields, and thus, they do not possess any pre-existing answers that they could utilise immediately. Students need more time to familiarise themselves with the field and the topic that is to be researched. It is almost impossible for companies to demand immediate results from students. However, students are fast learners, and the curve will soon begin to ascend sharply. The students will find information, research, create solutions and generate new information in a very efficient manner. By the midpoint of the course, the student project will yield even more value than the activities of professional consultants. However, please note that, in this context, I am using the price-to-quality ratio as my value indicator. Even if a professional group can create results that are equally as good or even somewhat better

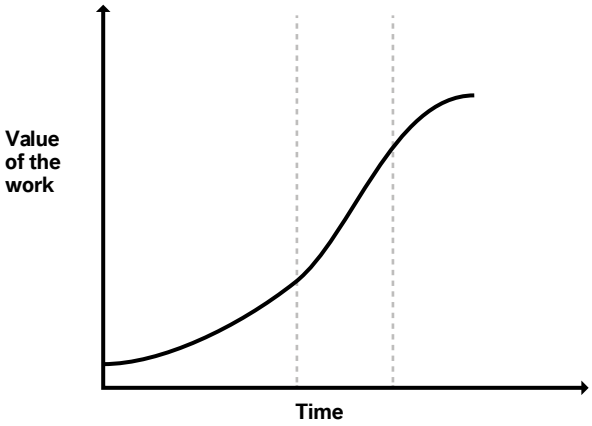

Figure 9.
Student project.

than those obtained by the student group, the price-to-quality ratio of their work will not be as good, since the work can cost, e.g. three times as much as student work.

The third phase involves drawing conclusions. This is a new situation for students. It is often difficult for many of them to provide any exact interpretations of their results to the company. By the end of the project, the student group will often possess a great deal of information — oftentimes enough to draw their own conclusions. During my own work as an advisor, I have noticed that many student groups shy away from announcing any strong conclusions in this situation. I would assume that this is due to two factors. First, the students are only at the beginning stages of their careers, and they can easily feel unsure of themselves and find it difficult to provide any strict conclusions to the company's representatives. The other reason has to do with the way that students are taught at universities, i.e. that

any strong conclusions require especially strong evidence. However, the materials that are available during a student project do not provide such evidence. Instead, companies are used to working with much more limited information than universities. For a company, the results do not need to fulfil any scientific criteria. It is often enough that the results point in a certain direction, such that the company can utilise them during its decision-making processes. The company can always commission more research or, e.g. prepare a better prototype if one is needed.

Summary

A company can benefit most from student projects when

a) the company is willing to familiarise students with the matter at hand. This then helps students begin their work in a more effective manner.

b) the company wants to draw its own conclusions.

A student project is not the most effective solution when

a) the company does not want to participate in the student familiarisation process in any way.

b) when the company wants solutions fast — e.g. within a week or month.

8.2 International projects

International student projects are projects that include students from many different countries. International student projects provide the university with the opportunity to network with different (top) universities from different countries and receive the latest research knowledge. For companies, international student projects provide the opportunity to utilise the know-how of foreign universities in a cost-effective manner. However, international student projects require special expertise from the university that wants to implement them. The situation is fairly simple if the entire project group is physically located in one country. But if part of the project group is located in, say, the United States or China, the entire project will require special management skills.

An excellent example of an international student project is the *ME 310* project that the students of Aalto University conduct annually in collaboration with a top international university.

Case

An example of an international student project: ME 310

ME 310 (Mechanical Engineering) is a product development course that has been developed by Stanford University. During this year-long course, master's degree-level students solve challenging corporate problems in groups. The student groups implement the entire design process, from planning requirement specifications to creating functional prototypes.

ME 310 brings together the best students in the field from around the globe. In Finland, Aalto University is part of the ME 310 network. However, its students cannot simply enrol in the ME 310 course: they must apply for it. The students who make it into the course are selected on the basis of their academic performance and interviews. The groups are international, and some members of each group can work from, e.g. Stanford.

With respect to other typical product development courses, the difference is that ME 310 takes the quality of its results one step further. Participation in the course can cost the company over 100,000 dollars, but in return the company gets to participate in a top international project.

Comparing ME 310 to other typical student projects is like comparing the Champions League to the Finnish national series. When you play in an international arena, the game gets tougher — be it product development or football.

ME 310		
	Strengths	**Challenges**
University	+ The university gets to collaborate on a project with the top universities in the world. + The activity is well-resourced and funds itself.	- Only a limited number of universities are admitted to the ME 310 network. In Finland, only Aalto University is part of the network at present. - The university must provide the student project with the equipment, facilities and staff resources that it needs. The students must be able to produce real prototypes.
Companies	+ The company receives a project group that contains top students from around the world. + The project can utilise, e.g. the skills of top American students from top universities.	- The projects last for the entire academic year — beginning in autumn and ending in spring. - The expensiveness of the projects requires thorough commitment from companies.

8.3 Multidisciplinary projects

In a multidisciplinary student project, the project group contains students from more than one field. Working life requires the ability to work with people from different backgrounds. Future employees cannot focus on just their own specialised field, as they have to be able to manage entities that demand the ability to comprehend the basic concepts of other fields as well. Multidisciplinary student projects help students perceive things in a comprehensive manner. When students conduct a project together, they also learn the different skills and knowledge of different fields from one another. For a company, a multidisciplinary student project provides an easy and cost-effective way of utilising multidisciplinary expertise.

The following two examples demonstrate the functionality of multidisciplinary student projects. The "Project Aces" has been active for several years now, while the pilot for the "News Game Project" was first arranged in the spring of 2015.

Case

An example of a multidisciplinary student project: The News Game Project

The *News Game Project* is a joint course offered by the University of Jyväskylä's Department of Communication and the Department of Mathematical Information Technology, where students create so-called news games in multidisciplinary teams. The course is implemented by having the journalism students plan and create the journalistic content of the games, while the students from information technology are responsible for the coding and gamification of the content. The students come up with the contents and activities collaboratively, meaning that the journalists and coders also learn how to work together in teams.

The games can range from simple computer mouse-clicking games to more challenging strategy games. In the games, the player makes choices and experiences the news topic in a more personal way. The games also include journalistic text sections that link the games to their news topics and provide players with more information.

The Finnish newspaper *Keskisuomalainen* participates in guiding the student groups and chooses the best games that are to be published on the newspaper's website.

How the course progresses

- A preliminary planning meeting that includes representatives from the communication and information technology departments as well as corporate representatives;
- The students for the course are selected from among the applicants;
- The course begins. The teachers divide the students into teams of five based on their skill profiles;
- Each group submits three news game suggestions, from which the company then chooses one for further development;
- The company tests the game and provides feedback for the final polishing stage of the game's development;
- The course ends with a joint event that is hosted by the university and company.

The departments created their own course codes for the course. From an administrative standpoint, the joint course consists of two separate courses acting in unison. The teacher from information technology evaluates her/his students and awards them 10 credits, while the teacher from the Department of Communication evaluates his/her students and awards them 5 credits. (The information technology students spend more time on the course than the communication students.) This means that the course could be organised with ease and without having to initiate a major bureaucratic approval process that could otherwise slow down the implementation of a course that crosses faculty boundaries.

The News Game Project		
	Strengths	**Challenges**
University	+ In the future, journalists are more likely to work in collaboration with IT-oriented coders than before. The course develops the students' collaborative and teamwork skills. + The course helps the students of communication and information technology find a common language. The language of communication is then turned into the language of code. + The course serves as a hotbed for new journalistic innovations. + Information is transferred between the teachers of information technology and communication as well as between the companies.	- Fitting together the different operational cultures and practices of different fields of study. - It takes time for the student teams to become familiar with one another.
Companies	+ The company receives three complete news games for free. + The company receives games that people between the ages of 20 and 30 want to play. + The company has the opportunity to recruit students from both information technology and communication.	- The pilot course required a bit more planning work from the company along with the teachers of the course. - When the course begins, one cannot tell what kinds of games will be created.

Case

An example of a multidisciplinary student project: Project Aces

Project Aces is a joint training course for students from the universities and universities of applied sciences in Turku that is coordinated by the University of Turku. In the Project Aces course, the students develop their project management skills with real client projects. For companies and organisations, Project Aces offers them the chance to utilise the skills of the students and receive new perspectives for their corporate development work.

Project Aces began in 2010 based on an initiative of the City of Turku. The reason for this was the challenging employment situation in the region at the time. Many students could not find employment in the Turku region, which then led to the migration of skilled workers to other regions. This, then, further exacerbated the situation, causing a negative downward spiral. The goal of Project Aces was to provide students with project management experience in a real situation and introduce them to potential employers. The exceptional thing about Project Aces is that it has extended its activities to include fields of study that traditionally are quite isolated from working life.
This includes many of the fields in the humanities. The activities of Project Aces have been free for its client organisations from the start, since the activities are financed
with public funding.

The Project Aces

	Strengths	Challenges
University	+ The different university faculties and universities of applied sciences do not have to organise the activity themselves, as it is done by the personnel for Project Aces. + The concept also benefits fields that have not traditionally included any corporate collaboration. + The students are selected for the project groups via an interview process, which improves the mutual suitability between the project and its students.	- Since the client company or other commissioner does not pay for the activity, the commitment of the client organisations can vary greatly. - The activity is disconnected from the university's other educational and research activities. - Organising the activities requires public funding.
Companies	+ A simple operational structure. + The commissioner receives a readily-assembled student group. + Free of charge.	- No quality guarantee. No guarantee for the results, and students can drop out at any time, leaving the work incomplete. - The commissioner is responsible for the guidance of the student group, so the quality of the results depends heavily on the commissioner's own activeness. - The students do not receive any academic guidance. - The activities are not directly connected to the university's research or other educational activities.

8.4 Scheduling and planning a project

When you are planning for the timing of a student project, the key question is whether the project is linked to the university's usual course schedules. If the project is to follow the normal schedules of the university, then the project is usually scheduled as follows:

a) A student project that lasts for one semester (3–4 months)

- September – December (autumn project)
- January – May (spring project)
- May – August (summer project)

b) A student project that lasts for one academic year (6–8 months) (September – April)

- The project always begins in the autumn and ends in spring.

Student projects that last for around three months are usually the easiest for companies, and the best time to start them is usually at the end of September/beginning of October or at the end of January/beginning of February. Summer projects are usually best initiated by the beginning of May. Of course, a project that lasts for the entire academic year can provide the most polished results.

The project plan

One key element of a student project is the *project plan*. The project plan is a document that explains what the project is about and what it sets out to achieve. The plan defines and limits the project. To ensure that the students learn and are committed to the goals of the project, it is crucial that the students are also allowed to participate in the project planning process. If the students who participate in the project have not been previously

taught how to create a plan, then the basic features of the plan must be presented in detail to them when the project is initiated.

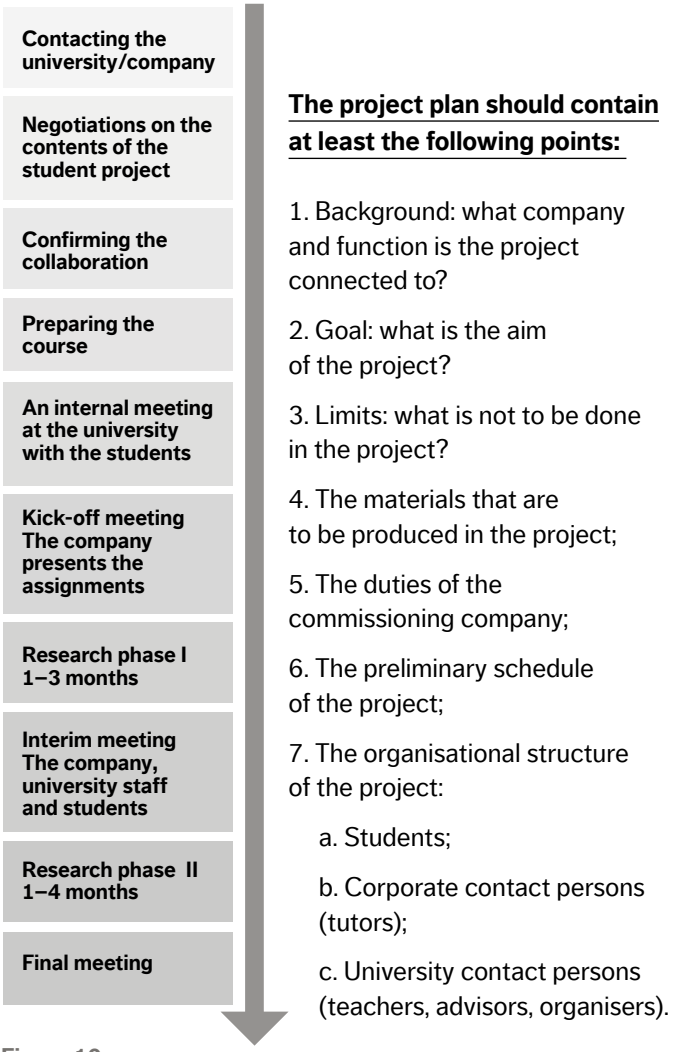

Figure 10.
The progress of a student project.

The roles of the different actors in a student project

The following list contains the roles that are part of a student project. One person can have many different roles.

The preliminary negotiator of the project

The person who initiates the negotiations with the company regarding the possible student project. The negotiator should be open-minded and somewhat sales-oriented. They should be able to negotiate on very different kinds of projects that are related to research and educational collaboration.

Project organiser (producer)

The person at the university who is responsible for the practical organisation of the student project.

The academic advisor of the project

The person who guides the work of the students. She/he can also simultaneously act as the project's organiser.

The project owner

The person who has the final say on the project for their organisation. When the project begins, it is crucial that both the university and company appoint a person who will represent their organisation in the project.

The corporate tutor

The representative of the company who participates in the guidance of the students. She/he can also be the owner of the project from the company.

9

The project that went wrong

9 The project that went wrong

Most books that focus on university–corporate collaboration focus solely on successful collaborative projects. Failed projects are usually just swept under the rug. However, from the perspective of learning, failed projects are usually more valuable than successful projects. We can learn from our mistakes.

9.1 Success creates the illusion of personal excellence

It is common for people to think that the success of project is due to their activities or the excellence of their organisations. Our activities can represent the key to our success, but success often involves factors that are in no way related to our own actions. For example, the success of a student project concept that is conducted in collaboration with a company could have been the result of something completely different than the concept itself. It could be that the student group was able to inspire itself, the corporate representative could have created an exciting atmosphere or the students might have simply been so skilled that they could achieve greatness despite receiving less-than-stellar guidance.

When a project succeeds, it creates assumptions about the strengths of an organisation. But when a project fails, it reveals the organisation's weaknesses.

Let's go back a decade. I had just begun organising student projects at the Helsinki School of Economics, which was the

name of the Finland's most valued business school at the time. I was excited and full of energy. During my first year in my new assignment, I only had a few projects that belonged to me officially, but I was then offered the opportunity to organise an international student project. The project in question was to be implemented in collaboration with a large company and included 30 international students, three academic researchers and three corporate tutors. Officially, the project belonged to another university unit, but my unit had at some point decided to handle the practical organisational matters related to it. When I was entrusted with such a large and international student project, I was quite excited — and I am sure that you could also see it in my work. I got to know a brilliant bunch of students and I worked well with the academic leader of the project. The company was also seriously invested in the project. As one could imagine, the project was a huge success. Our collaboration was praised by both the students and the company. The concept was even demonstrated abroad as a model example of how to organise university–corporate collaboration.

I organised a similar kind of project the following year, and our success continued, even though we faced some completely unforeseen challenges. The greatest surprise was that the company whose staff evaluation methods we were developing suddenly decided to initiate a layoff negotiation process. Despite everything, we were able to finish the project successfully.

Then my third year and international student project arrived. At this point, I had more responsibilities than before, and I also had several ongoing projects in my unit. These projects provided our unit with an income flow, but the international student project in question — which officially belonged to a different unit — just

took up much of my time. In fact, I had suggested to my superiors that we ought to let go of the international project since I had many more responsibilities than before. However, I soon realised that it is easier to take on new work responsibilities than it is to let them go. Despite this, I decided to lead the project since I thought that I could do it with the help of my old routines alongside my other duties at work. How wrong I was.

9.2 Mounting problems

The problems with the international project began immediately at the kick-off meeting with the company that were collaborating with. One way to leave a lasting impression is to have almost a third of your students be extremely late for this first meeting. The situation was made worse by the fact that I had instructed the students beforehand on the importance of making a good first impression and I had even told them a starting time that was 10 minutes earlier than the actual meeting time. My embarrassment grew every time the HR director of this large company had to leave the meeting to fetch yet another latecomer from the lobby of the building. You only get one chance to make a first impression, and in this case we blew it. Unfortunately, this was only the beginning of our problems.

Next, the student groups sent their project plans directly to the company without the approval of their academic advisor. This was done against the instructions that I had given them, but in their excitement the students had forgotten my verbal instructions. The company sent the project plans back to me with the following comment: "Would you like to teach your students how a project plan is done, or do we need to do the job for you?"

And the problems just kept mounting. The entire duration of the project was spent fighting one fire after another. The students also submitted some very negative feedback on how badly the project had been organised. The feedback in the student feedback forms, which were sent to the unit that was officially responsible for the project, was so bad that they never dared show them to me. However, few things remain in the dark for long. I finally heard through the grapevine what the students had written, and it was really rough. If politicians think that they have to take a beating every now and then, try organising a student project. Our operational concept, which in the previous years had been praised as a model example of good organisation, was now being heavily criticised. If our concept was so foolproof, then how could this have happened? But one can always find the good in the bad: a failed student project provided us with the valuable chance to find the keys to success.

9.3 What we can learn from a failed project

Figuring out what had happened revealed that success and failure are the result of the following factors:

1) The skills and motivation of the students;
2) The actions and activity of the company;
3) The academic advisors;
4) The organisation of the activities.

The project management skills and motivation of the students

As we went through the aftermath of the project, we realised that, in the previous years, each group had had at least one students who possessed good project management skills and

knew what a project plan should be like. During this unlucky year, none of the students knew how to create a plan. To remedy the situation, during the following year a quick introduction on the basics of project management was provided to every participant in the international project. There were other, more extensive changes as well. The previously voluntary project management courses were made mandatory for everyone. I also began teaching the project management course. I have always thought that one should not complain if they are not ready to do something about it. Instead of complaining about the students' poor project management skills, I decided to begin teaching them about project management myself.

The actions and activity of the company

One should not underestimate the significance of corporate representatives. During the previous years, the corporate tutors had been able to transmit their interest and excitement for the project to the students as well. However, in the year that everything went wrong, the corporate tutors were more withdrawn and mostly just expected the students to provide suggestions and thoughts for the project. They did not execute their duties in any way that was below par, but they also did not actively try to save the project. The university only has a limited number of methods with which to influence the behaviour of companies. The best way is to tell the company about the benefits that the collaboration can bring. At the same time, the company's representatives can be informed about how their words and enthusiasm can act as the key factors for motivating the students.

Choosing the academic advisor

An international student project usually includes three academic advisors, one of whom assumes a leading or coordinating role. During the problematic year, the oldest researcher, who was not interested in the practical leadership of the project, appointed himself to this position. His principle was that he would not read any student works that he deemed below par, and he also would not answer any of the emails that were related to the project. At the beginning of the project, I delicately tried to change the leading advisor, but due to the power structure of the academic community, this was an impossibility. After encountering this problem, the responsible academic person for the project was chosen with special care. Their selection now focuses on criteria other than just their academic merit (i.e. the number of publications that they have under their belt).

Organising the course

When we consider the course's shortcomings from an organisational standpoint, the blame can be placed squarely on my shoulders. Since it was my third year of handling the same project, I was under the impression that things would just run smoothly by themselves. When you factor in the contradictory position of the international project in our unit and my own increased workload, I spent far too little time preparing the project. My situation was made more difficult by the fact that my other projects provided our unit with income, which also paid for my salary, while the international project only sucked up our resources. It is easy to say afterwards that we should have provided the students with written instructions, for example. However, during the previous years we did just fine without any written instructions. Since the development of the interna-

tional student project was the responsibility of another unit, our unit did not deem it necessary to develop the concept beyond a passable level.

When things do not go well, it is usually easiest to blame a single person — so long as the person in question is located low enough on the totem pole. My luck was that I had already managed to attain permanent employment and that I already possessed credible work experience in organising projects. That meant that I was not fired, which could have been the case had I been organising my first project. During the following year, I was no longer responsible for the organisation of the international project, which came as a welcome change even to myself. The organisation of the international project was transferred to a unit that became wholly responsible for managing the entire programme. This meant that the same people now had both the power and the responsibility. The guidelines for the project were also improved.

Turning adversity into strength

Aalto University's international student projects have since continued to be more and more successful. Naturally, every year we face new and unexpected challenges, but we have overcome them and further strengthened our organisation.

I have also utilised the disastrous case when I train different organisations. The fact that I am not the hero of the story has helped others review their own projects with a degree of self-criticism and also discover what they can learn from them. You should not throw away a good idea after one failed case. The purpose of a prototype or pilot is to generate information so that the product or service can become even better in the future.

There is no place for hindsight unless it is used for creating a better future. After it becomes clear that a project has failed, people still have a tendency to sincerely believe that they would have acted differently in that situation. This sort of thinking can make us merciless and prone to blaming others.

It is easy to imagine that you will never make any mistakes if you have implemented only a few projects in your lifetime. But the project managers who have handled dozens upon dozens of projects know that, at some point, a project will inevitably come where you will feel that nothing is going your way, despite your best efforts.

Whenever I meet a person who tells me that they have never had any problems during a project, I always suspect one of the following:

- That their projects were so simple and routine that they were more like assembly lines than truly creative projects.
- That the person does not, in fact, have that much experience with projects.
- That they want to cover up any difficulties that they have faced.

I have worked with several different corporate project managers. Many of them have told me that my interpretation holds true for many other types of projects as well. I would like to encourage all organisations not to hide their problems, but to go through them, make the necessary adjustments, and thus, turn their troubles into valuable learning experiences before consigning them to the pages of history.

Let's work together on the next revolutionary project!

What one can learn:

- Make sure that you know the project skills of your students.
- Make sure that the same unit has both the power and the (operational) responsibility.
- Choose your academic advisor on the basis of factors other than just their academic merits.
- Your previous successes do not guarantee that everything is fine and that there is no room for improvement.

10
Collaborative platforms

10 Collaborative platforms

Several universities have invested in the development of collaborative platforms. These collaborative platforms can act as either physical or virtual meeting places, and most of the activities of these platforms are the end result of the university combining its pre-existing research and teaching activities. Collaborative platforms create the framework necessary for the collaboration between different units and organisations. These collaborative organisations can include universities, faculties, schools, companies, cities and other communities.

The characteristics of collaborative platforms

- A physical or virtual meeting place;
- A collection of different collaborative forms;
- Human resources responsible for maintaining and developing the platform.

An example of a collaborative platform: the Aalto Factories

After the establishment of Aalto University, many collaborative platforms were quickly created for the different fields of the university. The platforms help centralise and coordinate the research and teaching of a specific topic in a way that goes beyond the usual boundaries between the university's various schools. At Aalto University, these collaborative platforms are known as "Factories". Currently, there are three Factories in total: the *Design Factory*, the *Media Factory* and the *Health Factory*. The following descriptions of the Aalto University Factories have been partially adapted from the materials on the university's website. [19]

The Design Factory

The first collaborative platform that was created in connection with the establishment of Aalto University was the Design Factory. It is a new and open environment for product development-related research and education. Located at the Otaniemi campus, the Design Factory contains 3,000 m² of space for collaboration by researchers, students and companies. The Design Factory accelerates the development of Aalto University's teaching and operating culture by supporting interdisciplinary and problem-oriented learning and research.

The operational concept for the Design Factory was originally developed at Aalto University and has since proven to be a success, spreading across the world as the Global Design Factory

19 www.aalto.fi/en/research/factories

network. New Design Factory platforms that are based on the Aalto model are located in, e.g. Melbourne, Santiago, Shanghai, Geneva and Riga, and new Design Factories are being established around the world.[20]

The approaches and methods of the Design Factory encourage people to become involved in a new type of activity. The shared large prototype workshops, exhibition rooms, library and lounge area form a multifunctional meeting point for its users. The group work facilities and rooms of the Factory have been designed for flexible, 24/7 use. Companies are also welcome to use these facilities on the basis of open innovation.

From a *technological* standpoint, the Design Factory is connected to, e.g. electrical engineering and electronics, automation, architecture, mechanical engineering, materials technology, computer science and engineering, as well as to industrial engineering and management.
The expertise of the *University of Art and Design Helsinki* is present in the form of textile and clothing design, industrial design and environmental art. The Design Factory's links to the *School of Business* have to do with marketing, international business and innovations.

Of all the Factories at Aalto University, the Design Factory is the most focused on implementing student projects. The facilities of the Design Factory are utilised by several of the courses connected to these projects, the best-known being the previously-mentioned ME 310 course, as well as the Product Development Project (PdP). These student project concepts produce, e.g. new prototypes and innovations for the corporate partners involved with the courses.

20 www.dfgn.org

The Aalto Media Factory

The *Media Factory* brings together the researchers, teachers and collaboration partners of the six Schools of Aalto who specialise in *media and communication*. Its operations are geared towards identifying new and interesting areas of media research and launching joint research projects, curricula and courses between the Schools of Aalto University.

The activities of the Media Factory cover all forms of media, from the raw materials of the entire material and communication chain to the production, formation and reception of the message itself. Its focus areas include future media behaviour, the media industry and the role of media in society.

The Health Factory

The *Health Factory* was established at the beginning of 2013, and it is the newest of Aalto University's collaborative platforms. There is worldwide social demand for expertise related to health and well-being technologies. Finland has a great deal of expertise and knowledge in the field; the Health Factory helps direct this expertise to where it is needed.

The Health Factory seeks solutions for societally significant and concrete problems together with the stakeholders of Aalto University. One example of a problem that needs to be solved is finding new methods for the cognitive rehabilitation of stroke patients, which is a topic that the Department of Electronics at the School of Electrical Engineering has been tackling together with the Helsinki University Central Hospital.

New solutions for the health and well-being sector are also being developed at the Health Factory in order to promote the establishment of

new enterprises. A successful innovation can serve as the basis for a new company or it can be adopted by an existing company.

The Health Factory helps new *spin-off companies* [21] in their search for early-stage funding, during the creation of prototypes and *proof-of-concepts* [22], and with the acquisition of their first satisfied customers. The innovations are commercialised in 2–3 years. The goal of the Health Factory is to create several new spin-off companies per year.

21 Here, spin-off companies refer to companies that were created alongside the original research or teaching activity or as a result of them.

22 Here, proof-of-concept refers to documented proof, on the basis of which a product, service or technology operates and can potentially succeed.

The Aalto University Factories		
	Strengths	**Challenges**
University	+ The Factories provide the university with the opportunity to coordinate and collate research and teaching into larger entities. + New Factories are easy to establish to meet new research challenges.	- The Factories require financial resources from the university, especially during their establishment phase. - The functionality of a Factory largely depends on how well it can network within the university.
Companies	+ The Factories provide companies with a party that knows what there is to know about the research and teaching of a specific field.	- The Factories have limited resources for conducting research or educational collaboration with companies.

Case

An example of a collaborative platform: the Business Kitchen

The *Oulu Business Kitchen* is a joint project between the University of Oulu, Oulu University of Applied Sciences and the City of Oulu and was established in 2012. The Business Kitchen is a place where new companies are formed and old ones can re-energise themselves. The Business Kitchen acts as an umbrella that plays host to several different functions.[23]

The Business Kitchen's functions include:

1. The creation of a new business

This function focuses on the creation of a completely new business. The activity begins before the startup phase of a new company. The starting point is a three-month refinement period where new ideas are turned into products and services. The creation of a new business is supported by, e.g. the business incubator, startup centre and idea accelerator of Oulu University of Applied Sciences. The Business Kitchen has helped form dozens of new companies, and pre-existing startup companies have received new ideas for their business as well.

Terwa Academy

Terwa Academy is an action-based entrepreneurship degree program where students start their own companies after the first year of basic business studies, performing in a variety of different areas according to their skills and interests.

Key methods for learning are teamwork and doing real business at Terwa Academy's co-operative companies.

23 Business Kitchen

2. The collaboration between higher education institutions and companies

Demola

Demola is an international concept where students focus on creating real "demos", i.e. a demonstrative version, together with corporate partners. The companies are thus able to utilise the creativity and ideas of the students. The companies also have the opportunity to evaluate the skills of potential future employees and can purchase a licence for the results of a project. At the time of writing, there are three Demolas in Finland: one in Oulu, one in Tampere and one in Lapland. The Demola concept is described in further detail later in this book in connection with the presentation of the Demola in Tampere.

International Business Corridor

International Business Corridor i.e. IBC service is a very low-threshold opportunity for businesses to expand abroad with the help of our Universities' networks. IBC gathers an international student team to do market research and to help companies enter new markets. During a 10-week project, the student team investigates the case company's market potential in the target country.

3. Learning environments

The Business Kitchen provides new kinds of *learning environments* where students, jobseekers and supplementary students can work together.

Gamelab

The *Gamelab* is an educational programme that has been tailored to the needs of the games industry. As part of the educational programme, students work as real game designers for the programme's corporate partners. At the same time, they also learn about entrepreneurship.

Applab

The *Applab* is a re-education programme for experts in the field of ICT. The participants come from different backgrounds, with most of them having previously worked at companies like Nokia, Microsoft and Broadcom. The Applab is used to create new concepts that are related to, e.g. healthcare, energy, the environment or automotive industry software.

4. Co-working Spaces and Events

The Business Kitchen provides co-working spaces for meetings, events and exhibitions that are available to both students and corporate partners. The Business Kitchen also supports the arranging of different events, such as competitions, workshops and info sessions. One of the most interesting of these is the Polar Bear Pitching. The *Polar Bear Pitching* event is a startup event where budding entrepreneurs can pitch their ideas to investors from a hole in the ice(!). The +1 °C water gives a wholly new type of urgency to any pitch.

The Business Kitchen		
	Strengths	**Challenges**
University	+ The university or university of applied sciences do not have to do everything themselves. + A network that goes beyond one educational institution. + Students, teachers and researchers can meet with potential partners. + The volume of events can introduce size-related benefits. + A channel for the employment of students.	- Differences between the operational cultures of different organisations. The Business Kitchen has its own open operating culture that differs from the ways that the university and university of applied sciences operate. With different partners, there is added bureaucracy and lots of time consuming coordination.
Companies	+ When companies only have to contact one place (the Business Kitchen) cooperation is easier for the companies. + It is easier for companies to approach other companies through the Business Kitchen. + Small and large companies can find one another. + Competing companies can collaborate in the Business Kitchen on neutral ground. + Students recruitment and business opportunities.	- The Business Kitchen has grown and renewed itself quickly. Sudden changes have also made some operations more complex. - Fitting the annual rhythm of educational institutions with the needs of companies is challenging. - The Business Kitchen is formed from many pieces. These pieces have sometimes their own agendas.

Case

An example of a collaborative platform: Demola Tampere

The previously-discussed *Demola* concept represents a platform for open innovations where the creators of new digital services can meet like-minded individuals. The initiative for establishing Demola Tampere came from the corporate world, which had identified a need for new ways of learning and developing new activities. The higher education institutions of the region decided to address this challenge together with the City of Tampere by establishing the first Demola in Finland. At the moment, the partners of Demola Tampere include the University of Tampere, Tampere University of Technology, Tampere University of Applied Sciences and the City of Tampere. The programme is separate from the higher education institutions from an organisational perspective, but it works in close collaboration with them. Since its activities are not located under the roof of any single higher education institution, the different parties can collaborate as equal partners. This also helps save resources, since each partner can avoid setting up its own organisations. The first collaborative Demola project was initiated in 2008. The programme has subsequently played host to hundreds of projects involving thousands of students.

The idea behind the Demola concept is to create a common interface and location where companies and students can work together to create something new. The most interesting point is that the companies that participate in the Demola projects are not the commissioners of the projects nor the customers of the universities. The companies do not subcontract projects to students, but participate in common collaboration on the basis of co-creation. The companies also do not pay for their participation in the activities in advance. In

practice, the Demola concept works by having students create demos and prototypes that are based on the ideas and thoughts provided by the companies. The copyrights to these products belong to the students themselves. The companies can licence the results of the projects by paying a licencing fee to the student teams. Financially, collaborating with Demola projects is risk-free for companies, but they must be ready to commit to the collaborative process. Companies usually allocate 3–5 hours per week for a Demola project. These projects also help companies learn new things while they participate in the creative process together with students.

For students, Demola provides them with the opportunity to participate in real product development projects together with Finnish and international companies. As its name suggests, Demola is a place where students create real demos and innovations for new products and services. For companies, Demola offers a place where they can initiate and advance their product or service development projects in an agile manner. Demola's activities provide students with a physical location where they can work on their corporate projects as well as gain support for their work. The support is provided by both the partner companies as well as the staff of the participating universities. Demola is a meeting place for the students of the many different universities and universities of applied sciences in the region. However, the different backgrounds of the students can also cause issues. Especially during its formative years, it was not as easy for all students to include the work that they conducted at Demola as part of their studies. The starting point was that the students would receive 5–10 credits per project. Since Demola is a separate actor when it comes to the basic education of the universities and universities of applied sciences, every credit that was awarded for a Demola project had to be negotiated separately with the universities, schools and departments in question.

Demola Tampere	
	Strengths
University	+ Demola is a scalable and cost-effective concept for innovative collaboration between universities and companies. + Demola is more effective at binding companies to the collaboration than are individual collaborative projects. + Through Demola, companies and different higher education institutions can create new things together. + The universities and higher education institutions of the region do not need to create their own separate operations, which might then compete with one another.
Companies	+ Common work that students and companies do together creates value. + A company not only benefits from the results of a project, but also from learning together. Through Demola, the participating companies can train their staff to find new innovations. + The company does not pay for the collaboration. The company only incurs direct costs if it wants to purchase a licence for the results. + Demola collaboration creates a natural channel for continued collaboration, e.g. in the establishment of startup companies and research projects. + Demola is an excellent channel for companies to recruit new employees.

Demola Tampere	
	Challenges
University	- Demola has its own culture, which differs from the cultures of the different universities and universities of applied sciences. Internalising a new culture is not always a pain-free process. - Fitting together the different methods and timetables of different universities and universities of applied sciences requires patience. - Establishing a Demola requires time, work, the necessary facilities and usually project funding as well.
Companies	- Internalising the co-creation method can prove difficult for some companies. Students are not the company's subcontractors, but rather its partners. - The company must be willing to invest time into the collaboration. - The company does not own the exclusive rights to the results of the work. The students own the results, and the company can only purchase a parallel licence.

Currently, the situation is much simpler, and several of the departments at the participating higher education institutions have included Demola projects as electives in their degree programmes. In addition, the use of the teaching resources of the universities and universities of applied sciences for Demola activities is not always a given, but progress has been made in these matters as well since Demola was founded.

The activities at Demola rarely come to an end when a student project is completed. The programme provides students with the framework for further refining their ideas into a startup company. There have been cases where a partner company for a student project has become the first customer of the students' own company. The participating companies are also active recruiters of students. Many of the ideas that are born at Demola live on in the companies that hire the students who participated in particular Demola projects. In fact, 20 per cent of the students who have participated in the activities at Demola have been employed through the programme.

In just a few years, the Demola concept — which began in Tampere — has spread to become the international Demola network, which has members from around the world. Its activities have received both The Baltic Sea Region Innovation Award in 2012 as well as the Nokia Foundation Recognition Award for promoting and supporting Finnish scientific development and education in the fields of information technology and telecommunications. In addition, Demola was selected as the best summer job employer in Finland in 2011.

Summary

The Aalto University *Factories*, the *Business Kitchen* in Oulu and the *Demolas* in Tampere each represent different starting points for the creation of collaborative platforms. The Aalto Factories are an example of a platform that has been created by one university. The functionality and efficiency of the Factories have been proven especially by the fact that the Design Factory has expanded into a successful international concept that has been replicated around the world. The roots of the Design Factory are located deep in one of the Schools of Aalto University, and from there, its activities have spread into an international network.

Oulu's Business Kitchen and the Demola concept, on the other hand, represent a multi-party model where several higher education institutions and the city have created a joint platform. The collaboration is not always straightforward, especially when the different cultures of its different parties first meet. On the other hand, an entity that is formed by many parties can easily expand to include new partners in the future. A multi-party collaboration also provides the opportunity to create larger entities than what the resources of a single unit could ever hope to accomplish.

Which of these, then, is the most optimal model for a collaborative platform? I doubt that any single model can fit every situation. These examples prove that a collaborative platform that includes many actors as well as a platform that serves to expand and develop the activities of a single actor can both result in successful concepts that can attain international success as well.

11

Building university–corporate collaboration

11 Building university–corporate collaboration

When building university–corporate collaboration, one often faces a certain type of variation of the chicken and the egg paradox.[24] The university needs a company that can commit itself beforehand to a type of collaboration that the university could create the right kind of educational framework for. The company, on the other hand, cannot (or will not) commit itself to a collaborative effort before the framework for the collaboration (e.g. a collaborative course) has been prepared.

The university should begin constructing the framework for corporate collaboration even if it does not yet have a corporate partner. This is due to the fact that it usually takes at least six months for a university to initiate a new mode of operation or collaborative course. The corporate partner, on the other hand, can be found even a week before the course begins. In addition, it is much easier to market a potential collaborative effort to companies when the educational framework for the collaboration has already been completed. Any potentially interested companies should also be active and contact the professor responsible for the subject beforehand, even if no ready-made collaborative method yet exists.

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24 The chicken and the egg paradox refers to the philosophical dilemma first posed by Aristotle: "Which came first, the chicken or the egg?" The question essentially is, where did the first chicken or egg come from, since each is a result of the other?

25 Aarnisalo, Iivonen & Lempiäinen (2013)

A checklist for university representatives who are looking for new corporate partners

- Do not be afraid to initiate contact. University staff usually receive a warm welcome at companies.
- Find out whether anyone at the university has had any previous contact with any particular companies. Even the most minor of connections can serve as a good starting point.
- Find corporate contacts by participating in, e.g. corporate seminars.
- Avoid sending any email to a company's *general* email address. These messages are usually placed at the very tail-end of a priority list.[25]
- Try to contact the decision-makers: the CEO of a smaller company or the middle managers of a larger corporation.
- Include your core idea in the text field of your email. People do not always open email attachments.
- Avoid giving the impression that you are there to sell a service — avoid acting like a telemarketer. Tell the person that you want to find out whether the company would be willing to initiate a collaborative effort with your university.
- Create a good website that is aimed at companies.

A checklist for companies that are seeking a partner university

- If you know of a planned collaboration that focuses on a certain educational or research field, contact the professor or department head directly.
- Even if your main focus is on educational collaboration, the study office is rarely the right place to contact; the office is not usually well-versed in corporate collaboration.
- The best people to contact are the contact persons for corporate collaboration (if any exist), the development directors and the communications officers.
- The person with whom you first discuss the topic may not be familiar with the collaborative method that you are interested in. This does not mean that the correct person does not exist. You might find the right kind of collaborative model in another department.

11.1 Conceptualisation

The word "concept" has many different meanings. A *business concept* describes the different factors of business: the service/model, revenue model, customers, place in the value chain, operating channels, and so on. In the arts, a concept is usually an early sketch of the final work.

In this book, the word "concept" refers to a finished entity where each component of the university–corporate collaboration has been carefully planned out and whose operations have been described in writing. A well-conceptualised collaborative form is easy to present to both the internal and external parties of the university. A well-conceptualised collaborative model should not be left up to just one person. It makes orienting new employees easier, since they can be provided with clear instructions on how to proceed. Conceptualisation can be thought of as a kind of manuscript for the collaborative form that is used to implement the collaboration.

11.2 Productisation

Productisation can also be called the stepsister of conceptualisation; with it, the same form of collaboration is assessed from the customer's perspective. The productisation of an activity is both very simple and very difficult. It is simple because productisation does not require splitting an atom or mapping out DNA strands. However, productisation is also difficult because the way of thinking that it requires is more alien to parts of the university world than, say, the splitting of an atom. Traditionally, the communicative activities of a university have been planned to meet the needs of students, researchers and teachers. The first step in any university–corporate

collaboration is understanding that companies should also be a part of the receiving end of the university's messages. In the same way, the goal is to familiarise the people who work at universities with the corporate world: what companies are, how they function and what they seek from collaborating with universities.

Do we have any opportunities for corporate collaboration?

Look in the study guide, you can find them there (if there are any).

You cannot ask a company to look for any collaboration opportunities from a 250-page study guide that is meant for students. Over the years, the study guide has functioned as the "Bible" for all things study-related. However, it has been made with only the students in mind, not companies. So, it is time to write the "New Testament" that will go along with this "Bible", and it should have a new target audience: companies.

Time and time again, company representatives have brought up the fact that it is easy to get in touch with the people of a university. The ensuing discussions are useful and have helped highlight many common interests. But when it is time to start doing things in practice, a problem arises: the university may not necessarily have any pre-prepared operating concepts that could be used to facilitate the collaboration. To ensure that the collaboration can function properly, both companies and universities need to step out of their comfort zones. Companies must accept that they cannot demand that universities become commercial service organisations. The core task of universities is still to educate and produce information. The universities, on the other hand, must learn to describe their collaborative

opportunities in ways that companies can understand — this is the reason for the focus on productising services. With productisation, the university collaboration is transformed into an easy-to-understand package for corporate partners that is also easy to use. The corporate representatives should know what the collaboration will require of them and what it will provide in return.

The main questions that companies have

- What will the company receive from the collaboration?
- What will the collaboration cost?
- How much working time will the collaboration require from the company?
- When will the collaboration begin and when will it end?
- How will the collaboration proceed in practice?

If the university can answer these questions in a clear and simple manner, the service is already fairly well productised.

11.3 Marketing the activities

When marketing any potential collaborative opportunities to companies, the following two channels are key:

1) Word of mouth

Word-of-mouth marketing covers both students and university staff. The people who have graduated from a university and the people who work there represent the best marketing channels possible. They know the substance of their subjects and they have their own links to different companies. Naturally, this knowledge will not spread overnight, and it requires continuous, long-term effort over the course of many years. Every alumnus of a school is a potential marketing tool. In addition, the alumni are seen as a more reliable source than any traditional marketing channels.

2) The internet

A website can reach a wide audience and it is not costly to design. When designing a page that is aimed at companies, avoid using the university's degree and educational jargon. The website must be able to provide clear answers to the questions that are relevant to companies.

Case

An example of the importance of marketing: Materials Design — Advanced Project Design

A few years back, the Finnish business magazine *Kauppalehti* published an article on how the Aalto University Department of Materials Science and Engineering had initiated a highly visible collaborative project called *Materials Design – Advanced Project Design*. In it, a multidisciplinary student group designed a concept for the coin of the future, *the Coin of 2020*, for the Mint of Finland. The group had come up with many different innovations for the coin: a modern design, a self-cleaning antibacterial surface, an energy collection and capture system and a highly-visible colour scheme, as well as LED lighting. The course had been a success and had received a lot of good publicity, so I decided to interview the leader of the course. I wanted to find out how the course planners had productised the course for companies.

I assumed that a course that had received so much visibility would be turning down would-be corporate partners left and right. To my astonishment, I was told that the department had had trouble finding any corporate partners during some years. The course enabled the creation of many different types of materials technology assignments for companies. All that was required was that the company contribute to the costs of the materials. I was amazed. How could this kind of collaboration not be of interest to any company? I soon found out why after I asked how they had marketed the course to potential corporate partners. They said that they had not conducted practically any marketing efforts at all. They had not even created a corporate-oriented webpage for the course. When I asked how any company could find out about their collaborative opportunities, the researcher who was responsible for the matter answered that they could just ask him. I could not help but run with this point, so I asked him how the companies knew to contact him. At this point, the researcher realised what I was getting at and noted with a smile that marketing was not their strong suit.

Materials Design – Advanced Project Design

	Strengths	Challenges
University	+ The course leaders are very experienced in materials technology.	- The conceptualisation and marketing of their activities is lacking. - No productisation efforts have been made regarding any collaborative opportunities.
Companies	+ Many different proto-typing and development opportunities for materials use. + Very low costs when compared to any commercial alternatives.	- Since the activities have not been productised and the opportunities for collaboration are not marketed to companies, the companies must make an effort or know the right people in order to find the channels for collaboration.

11.4 Pricing university–corporate collaboration

Much in the same way that university representatives should understand the basic concepts of business — like how to handle customer relations — companies and other university partners should understand the basic nature of universities. Universities are not commercial service providers, but scientific educational and research organisations. Even if a company contributes to the costs of the educational collaboration, it still does not alter the basic task of the university. The most functional approach is to see the university and company as equal partners who both invest time and money into their mutual collaboration.

The following section focuses on the principles that govern how universities can *price* corporate collaboration in education.

Business activities are not part of the tasks of the university. This is why one of the central (business-related) areas of collaboration, the pricing, is so challenging for universities. Universities have wrestled with this aspect in various ways. Sometimes a university is reluctant to price its valuable work accordingly, while at other times the price tag has been so high that every company eventually pulls out of the collaboration. According to the basic concepts of economics, the party that pays for the product or service is the "customer" and the party that is paid by the customer is the "seller". For universities, these concepts are still so alien (except in the various schools of business and economics) that some even resist them just on basic principle. However, adopting a customer-oriented mindset is crucial, as it forces universities to really focus on their customers. A customer-oriented mindset is also important even in situations where no money exchanges hands.

The university and company – service provider and customer, or true partners?

The question of pricing is especially relevant when a student or student group is conducting a student project whose result will be utilised by a specific company. The students do the work, and the university is responsible for organising and guiding the project activities. What should the company pay the students and university? Should they pay both together, or each separately? Educational collaboration has three parties: the university, the students and the company. This section on pricing has been written with the basic assumption in mind that the university negotiates with the company on the full price of the project on the students' behalf as well.

Pricing model 1: free collaboration

For universities and companies, the most effortless collaborative method that requires the least amount of red tape is to have the collaboration be *free of charge*. When no money exchanges hands, no agreements are required, and the university does not need to ensure the quality of the results of the collaboration. At first glance, it might seem that free collaboration models would be at the top of any company's wish list. However, the matter is not quite that simple. Companies are willing to pay for collaborative efforts if they feel that they will be able to benefit from them. Smaller companies in particular have even

been grateful that universities are finally putting a price tag on the services that they offer for companies. This is because free services are a source of disruption in the service provider industry.

I remember one conversation that I had with the CEO of a small company that provided educational and recreational getaway services. The CEO's complaint was that it was impossible to get customers to pay for their services when different educational institutions were offering the same services for free or next to nothing. "It's impossible for us to compete with educational institutions, since they receive their funding from the state", the CEO noted. If the university does not charge any fee for a service that the company would otherwise purchase from some other company, the university in effect becomes a troublemaker in the marketplace. Since the university receives its funding from the state, it can offer its services at prices that are lower than their production costs.

Pricing model 2: cost-based pricing

At first glance, cost-based pricing can seem like a very functional way of calculating the price of a collaboration for a company. The matter is not quite that simple, though. One common way of handling costs is to divide them into direct and indirect costs.

Direct costs

- The wage costs of the course or student project advisor (teacher)
- The wage costs of the course or project coordinator, producer or organiser
- Material costs
- Intellectual property rights transfer coststst

In Finland, the employer must pay both the employee's gross wage as well as all indirect labour costs. The most common indirect costs include the pension contribution, social security contributions, unemployment insurance contribution and accident and group life assurance payments. In addition to these costs, there are domain or job-specific bonuses, such as occupational health care, holiday bonuses, and so on. For an employer, the true wage costs of an employee are usually presented by calculating the so-called indirect costs percentage, which usually varies between 24 and 33 per cent.

Indirect costs, i.e. overhead

- Teaching facility costs
- Administrative staff costs plus related indirect costs
- Administrative building costs

Allocating indirect costs to any individual targets/projects is problematic, since the costs may not occur and their size is not defined on the basis of any individual target. One way of solving the problem is to utilise the so-called overhead charge in all calculations. The overhead percentage is the percentage that is added to the bill after any direct costs to cover the share of indirect costs.

How does the billing of overheads fit into university–corporate educational collaboration?

I have met many university course leaders who have stated that they have given up on any paid-for educational collaboration with companies since every collaboration is almost impossible to sell to companies due to the high overhead percentages. It is difficult to justify to a company that half of what they pay is spent on overhead expenses that, from the perspective of the company, have nothing to do with the educational collaboration in question.

If one's clientele is not ready to pay the desired price for the product or service, in the corporate world this would mean either lowering costs by streamlining the organisation or else bankruptcy. The university, however, is a large and fragmented organisation, and pricing its activities and having a customer-oriented mindset are largely unheard of within its walls. In addition, the decisions on how much the university will charge for its services might come from the university's administration,

which is usually far removed from any corporate interfaces. For companies, sales are everything, but universities can still act like a Soviet-era car factory in some respects: all decisions are made by the top management and without consulting any companies, i.e. the customers.

Overhead expenses could be compared to taxes that are necessary for ensuring the continuation of the university's activities. Part of these "taxes" are spent on maintaining the central organisation of the university. For many of the employees who work outside the central administration, the central organisation of the university can seem like a distant group of people who mostly like to limit the work of everyone else while they focus on their own issues. However, while in reality the central organisation and management are usually quite efficient, they can easily remain distant from the university's teaching and research staff. This is why the teachers and researchers of a university may not have a clear idea about how the maintenance of infrastructure can both result in costs and also support their (educational) work. The temptation to forego all corporate collaboration is great when there is no stick and every carrot always seems to get gobbled up by the administration.

Pricing model 3: value-based pricing

In *value-based pricing*, the price of the university–corporate collaboration is calculated on the basis of the value that is produced by the work. The problem is that it is very difficult to evaluate the value of work done by students beforehand. During my career, I have seen several student works that have

helped their corporate partners save several millions of euros during their next fiscal year. However, the university cannot vouch for the quality of the solutions. The work that is done by students always includes a risk. Due to budgeting reasons, it is important for both the university and the company to know the agreed upon price for the collaborative activities when negotiating the collaboration itself. For the reasons that I have stated above, the value-based pricing model is very difficult to apply in university–corporate collaboration.

Pricing model 4: educationally / corporately-oriented collaboration

The following figure demonstrates the pricing of collaborative activities that are *corporately-oriented*. In it, the pricing is based on the following principle: the more the educational collaboration stems from the needs of the company and serves it, the higher the price that the company pays. These sorts of collaborative forms include theses and student projects that are commissioned by the company itself. The lower left corner of the figure displays the collaborative forms where the company mostly just supports the teaching. These kinds of collaborative forms include visiting lectures and sponsoring a course without having the company influence the contents of the course.

The cases that are located in the top left corner and lower right corner are rare. It is exceptional for a company to support the teaching of a course with a large sum of money without wanting to also involve itself in the contents of the course. It is equally exceptional to have a course whose contents are customised

according to the needs of a specific company without also having the company pay the university for the privilege.

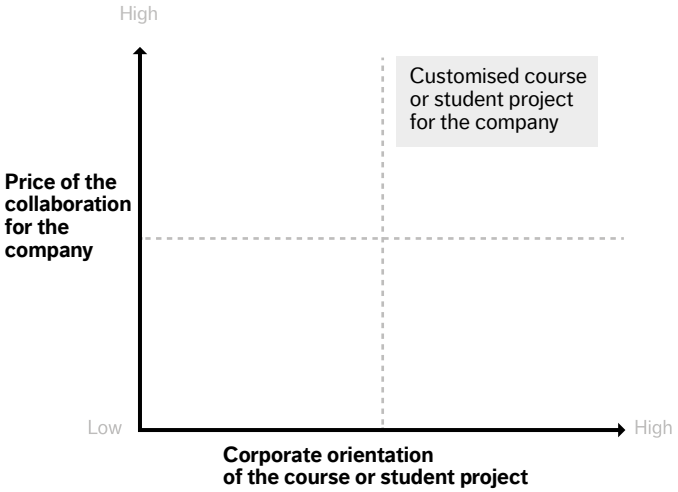

Figure 11.
Pricing model 4: educationally / corporately-oriented collaboration.

Pricing model 5: the scope of the IP rights that are transferred to a company

Defining the price of a collaboration based on the transfer of *intellectual property rights* (IPR) is a good solution in some specific cases. The price that a company pays is thus affected by whether the company receives partial, parallel or full rights. If, as a consequence of the collaboration, any IPRs are transferred from the students to the company, then the company must pay the students for these rights. It would violate the legal protection of students if the students would have to give up

the commercial utilisation rights of their course work without receiving any compensation.

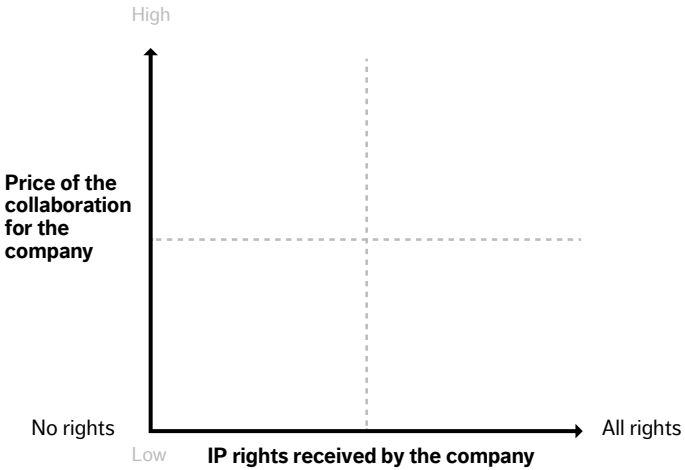

Figure 12.
Pricing model 5: the scope of the IP rights that are transferred to a company.

The transparency of pricing and costs

Regardless of the pricing basis, the university must be able to tell how it will use the money that the company has paid for the student project. The most sustainable course of action is to invest the money that the university receives from the company in its entirety into organising and maintaining the activity that the company is paying for, e.g. the organisational and material costs of the collaborative course.

When doing business, most of us are interested in how the price of the service or product has been determined. This is why universities should also be willing to provide enough transparency

regarding their cost structures so that the corporate partner can know what factors account for the costs of the collaboration. There are situations where pricing discussions can feel a bit awkward. This kind of situation can arise when a university uses the company's money to, e.g. only fund its basic teaching responsibilities. However, this awkwardness is deserved, since there is reason to criticise this sort of procedure from both an ethical and a judicial standpoint.

Funding teaching with external funding — you dance to the tune of the one that plays the music

The starting point for funding the activities of Finnish universities is that all teaching is paid for out of the basic funding budget that the universities receive from the state. Corporate collaboration courses can create an exception to this rule: the funding for this type of course comes either partially or completely from the collaborating company. When the costs of a course are covered solely with funding that is received from a company, this kind of situation can include both benefits and challenges. When a particular operation of a unit at a university is not chained to the basic funding budget, this then provides the unit with a certain degree of independence: the distribution of the university's internal funding does not determine its fate. The challenge comes from the fact that the unit's dependence on external financing can increase the unit's pressure to "sell" the collaboration to companies — which, at worst, can compromise the quality of the teaching and the basic task of the university.

As a real-life example, there was once a university unit that, for several years, managed to implement very successful student project collaborations with various companies. The money that

the companies paid for the students' work was used not only to organise the corporate collaboration courses, but also to pay the wages of the other teachers of the unit as well. The students were not compensated for their work, but they were happy with the interesting assignments that the companies provided. The situation remained good for a while, but as the economic situation worsened and the number of corporate commissions decreased, the unit could no longer afford to pick and choose the assignments that would best serve its educational activities. Instead, the unit was forced to assign the students with work that fit the wishes of the unit's corporate collaborators but did not support the students' learning in the best possible way. The situation became difficult for both staff and students.

As a general rule, if a unit's educational activities receive corporate funding from outside the university, the share of this external money should be kept at under 50 per cent of the total costs of the teaching. This helps ensure that the dog is always wagging its tail, instead of having the tail wag the dog.

The following example illustrates how Aalto University's Customized Business Projects were productised into a successful concept.

Productising the Aalto University Customized Business Projects concept

With Aalto University's *Customized Business Projects*, students handle real corporate assignments under the guidance of an academic advisor. In 2004, when I transferred to the then Helsinki School of Economics to act as its business project coordinator, the School's customised student project services for companies were fading away. The number of commissioned projects by companies had dropped from the previous, better years, and since fewer and fewer projects were being implemented, the employment status of the coordinator who was responsible for marketing them was changed from full-time to part-time. But when there are less sales, it rarely helps to cut marketing resources. So, naturally, the number of projects kept on decreasing.

When I started working at my new position as coordinator, I asked my colleagues why companies were no longer commissioning any projects. The only kind of reply that I received was a vague answer having to do with the overly expensive prices of the projects. To my surprise, I soon discovered that even though we worked at the largest school of business and economics in Finland, our unit had never commissioned a single solid customer survey on our student projects that we could use. During my own studies, I had fallen asleep during many a marketing 101 class, but now I understood the significance of McCarthy's classic 4P model in a completely new way.[26] McCarthy proposed that the basic set of marketing tools includes *Product*, *Price*, *Place* and *Promotion*. I began

26 McCarthy (1960)

the task of conceptualising and productising the student business projects by conducting a customer survey with the companies that had utilised the student projects of the School of Economics in the past. I conducted my survey with the help of interviews that covered approximately 80 per cent of the companies that had collaborated with the School during the previous three years.

Product

The discussions with our customers revealed that our *product* (or, rather, service), i.e. the projects that were done by our students under the guidance of an academic advisor, was sound. The companies thought that the projects had been of a high quality and compared them to various commercial research and consultancy services. So, there was no need to fine-tune the service itself. However, the way that the service was positioned in the mind of the customer was quite significant. Where my predecessors had marketed the service as "student work", I set out to sell the expertise of the most prestigious school of economics in Finland. The contents of the service were still the same as before, but now our customers thought that they were purchasing something even better.

Placement

In this case, the *placement* of the service includes such aspects as when the service is conducted for the client company and on what kind of schedule. Since customised business projects are wholly independent of any regular course schedules, we possessed a significant competitive advantage compared to other similar concepts being developed at other universities. The fact that the School of Economics was located in the heart of Helsinki was also an advantage. I renewed our agreement models and accelerated the process by cutting out any unnecessary activities, such as having our reports be printed. Now, all reports are distributed as pdf files only, and we have been

able to stop using printed reports completely. This has enabled us to finalise our reports more quickly and to lower our costs.

Price

When it came to the *pricing* of our product, we did a complete 180. Contrary to what we expected, our services were not too expensive, but rather, too cheap. I remember the moment when I asked one of our customers about our pricing. After a moment, he said: "You could've charged us more for it." You do not need to have a Nobel Prize in economics to understand the meaning of that sentence. For a student work, the previous price may have been too high, but for expert work, the price was very low. I decided to markedly increase the price of our student projects. Every new project was sold at a higher price than the last, until the prices began to match their true organisational costs. Finally, we standardised our prices at around 10,000–15,000 euros.

Promotion

We found that our most valuable promotional channels were word of mouth and the internet. The effectiveness of our word-of-mouth promotions was increased by our messaging on our student projects within the School. Our goal was to ensure that every person who worked, studied or had graduated from our School would tell other people about our activities. We also completely transformed our website. The School of Economics' previous website had been so hard to navigate that even I could not find our student project information pages. Luckily, the School's website was due for a makeover, so I was able to volunteer myself as the responsible person for the contents of our corporate collaboration pages. Instead of focusing on our degree structures, I adopted a more company-oriented approach. I asked myself what questions companies usually have when they are thinking about commissioning a student project, and our new corporate

pages were designed to answer these questions.

As a result of our revamp, the number of student project commissions went up by 350 per cent in just a few years — at the same time, as we raised our prices by 70 per cent. The result was that the previously-unprofitable student project activities could now fund themselves. I saved up any small surpluses that we accrued so that during the next economic downturn, the Customized Business Projects programme would still have the resources to market itself. These surplus buffers were removed when the Helsinki School of Economics was merged with Aalto University. During the last eight years, there has only been one instance when our activities have not been able to cover their own costs. This happened during the aftermath of the 2008 financial crisis, when all companies slowed down for a moment and reduced all of their research, exploration and product development activities.

To be able to best sell educational corporate collaboration to companies, the activities must be based on the true strengths of an organisation. When you know your strengths, the rest is just productisation. Universities must ensure that their teachers have the right kind of substance and organisational and marketing experience that student projects require. Each faculty/department should be proud of its area of expertise and build its corporate collaboration activities upon that foundation.

12
Collaboration agreements

12 Collaboration agreements

When you are thinking about the *agreement* that a university–corporate collaboration might need, consider the following factors:

1) Do you need a *written* agreement?
2) If you do, who are the parties involved in the agreement?

As a general rule of thumb, if the collaboration involves the transfer of money or intellectual property rights between the parties, you should always create an agreement in writing. The parties to the agreement decide on the *type* and *scope* of the collaboration: research or educational collaboration within a particular department or faculty or the entire university? Always remember that only a legal entity can be party to this kind of agreement: an entity that is registered and that has either a business ID or a business ID that has been registered with the Register of Associations. A natural person can also act as a legal entity if they can be identified in the agreement by, e.g. their student ID number.

The agreements related to educational collaboration can be roughly divided into three groups:

1) Agreements on collaborations that are conducted in individual courses. The parties to the agreement are the university, the company and, when necessary, the students.
2) Partnership or framework agreements. The parties to the agreement are the university and the company.
3) Letters of intent. The parties to the agreement are the university and the company.

12.1 General agreement levels

Collaboration agreements for individual courses

A collaboration that is limited to just an *individual course* represents the most common form of corporate collaboration. If the collaboration is limited to just featuring a company representative who acts as a visiting lecturer and presents the course case to the student group or otherwise participates in supporting the course, then there is no need for a signed agreement for the collaboration. The agreement process can easily take away time and resources from the collaboration itself. However, it is a good idea to agree on the details of the course in writing, e.g. via email, even if no official agreement is made and signed. Educational collaboration involves three parties: the students, the university and the partner company. It is important to remember that the students of a university are not employed by the university like the employees of a company are. If the collaboration does not involve any transfers of intellectual property rights or non-disclosure agreements for the work that the students conduct, the university and company

can agree on the collaboration without including the students as signatory partners. Even when the collaboration involves the transfer of the intellectual property rights of student works, most companies usually wish that the university will act as the negotiating partner on behalf of the students as well. To have the university represent the students in an agreement, the students must sign an agreement with the university beforehand. The easiest way to do this is to sign the agreement at the beginning of the course or student project. It is easy to negotiate beforehand with a company on an agreement where a student transfers, e.g. the use rights for a final report. If the entity that is to be transferred is an intellectual property right whose transfer involves granting a royalty or lump sum to the student who did the work, it is better that the agreement is made directly between the company and student.

Partnership agreements

With a *partnership agreement*, the university and company can agree on a type of collaboration that is more extensive in nature than a single course. The agreement can also be called a framework agreement if it creates a framework for any later collaboration. This type of agreement usually lasts for several years and can include different areas, such as course collaboration, media visibility, student recruitment collaboration and research collaboration. Some good examples of partnerships include the Aalto University School of Business's *Partnership Programme*, which is aimed at companies as well as the *Innovative City* programme between Aalto University and the City of Helsinki.

Sometimes an organisation or corporate partner may be named a strategic partner of a university even if the partnership will

have no strategic effect on the activities of the university or partner organisation. The partnership may be significant for the person or unit who will sign the agreement, but the agreement will not necessarily make the partnership significant for the entire organisation.

Letter of intent

A *letter of intent* does not usually bind its parties, as it is only an expression of the willingness of the parties to collaborate with one another. Since the agreement is not binding, it can include many collaborative methods that may eventually become a reality. A letter of intent can also serve as a sort of umbrella covering the different ways that the university and company can collaborate together. The practical forms that the collaboration will take must always be agreed upon separately, and individual agreements should be drawn up whenever necessary.

Innovative City

Innovative City® is a partnership programme between Aalto University and the City of Helsinki that aims to generate innovations that support sustainable urban development through multidisciplinary collaboration in research, art and development. Collaboration under the programme is based on the scientific and artistic activities of Aalto University and the development needs of the City of Helsinki. The programme aims to support the realisation of the strategic objectives of Aalto University and the City of Helsinki. The programme has played host to projects that have focused on, e.g. housing, traffic, construction and the ageing of citizens. In addition, the programme has also included research that has focused on, e.g. regional competitiveness, the management of organisations and various service processes and their design. The collaboration has been active for several years and involves every School at Aalto University.

The *Innovative City*® programme provides support for the preparation of collaborative projects and the dissemination of results into the hands of regular citizens. The financing of the programme is divided equally between the City of Helsinki and Aalto University. The other funders may include, e.g. TEKES, other municipalities in the metropolitan area, state ministries, the EU, various companies and other communities.[27]

The strength of the *Innovative City* partnership programme is that its partners, i.e. Aalto University and the City of Helsinki, have used it to commit themselves to a long-lasting collaborative relationship. The partnership programme creates an avenue for including the different collaborative methods

27 www.innovatiivinenkaupunki.aalto.fi/en, www.facebook.com/pages/Innovatiivinen-kaupunki

of several fields, such as course collaboration, student projects and research, so that they can become part of a larger whole. In practice, the *Innovative City* collaboration is coordinated by two Aalto University employees. Previously, they were also responsible for coordinating the innovation fund of the City of Helsinki from within the university.

The collaboration between the City of Helsinki and Aalto University, which has lasted for several decades, is being renewed yet again as this book is being written. The entire Helsinki metropolitan area is being conceptualised as a single entity. In addition to Helsinki, this entity includes the cities of Espoo and Vantaa as well as Aalto University and the University of Helsinki and possibly the universities of applied sciences in the metropolitan area as well. What is certain is that the collaboration between the universities and their surrounding cities is likely to continue in the future. The future shape of these collaborative models remains to be seen.

The Innovative City Partnership Programme		
	Strengths	**Challenges**
University	+ Creates a "home" for the collaboration between the City of Helsinki and the university. + Better management of the entire collaboration. + The importance of the collaboration increases within Aalto and the City of Helsinki.	- The organisation of the activities costs about as much as the salary of a single employee (the coordinator). - The coordinators of the collaboration do not have any direct authority within the university, so the advancement of matters requires a great deal of dialogue.
Companies	+ The activity has produced new innovations that the city has been able to develop for its own use. For example, the concepts for Elsi safety floors and the route planner for public transport were originally created at Aalto University. + The university collaboration provides the city with the opportunity to receive and test ideas that would be difficult to study within its own organisational structure.	- The activity requires an annual financial investment that is used to pay, e.g. part of the coordinators' salaries. - Part of the city's projects demand faster action than what is possible within the university's rigid structure.

12.2 Practical tips for collaboration negotiations

In the 1980s, the commerce-oriented newspaper *Kauppalehti* published a series of articles that compared the behaviour of humans to that of dinosaurs. There were surprisingly many similarities. At the negotiation table, a "dinosaur" is someone who thinks that they are a tough negotiator or the protector of their herd and who sees the other party as their opponent — or even as their enemy. The dinosaur will look at matters purely from their own perspective or the perspective of their organisation, without taking their negotiating partner's perspective into account. At the negotiation table, a dinosaur is like a boxer who alternates between blocking and attacking. The goal is to knock their opponent out.

Most dinosaurs seem to reside in legal and administrative circles. These fields provide dinosaurs with ideal living conditions and plenty of food in the form of laws, regulations and practices. A dinosaur is not interested in finding common solutions, only in protecting its territory. The leaders of the herd also respect (and sometimes even fear) the growls of the dinosaur, especially when these are imbued with such heavy words as "the law", "study regulations", "science", "house rules", "budgets", and so on.

But, as Timo Lappi aptly notes on his *Kauppalehti* blog, there is also another type of negotiator: "luckily evolution has also developed new kinds of negotiators as well. Homo Foedus (contractual man) is a solution-oriented person who aims for an overall solution that will benefit everyone at the negotiation table. When Homo Foedus begins negotiating, they do not try to maximise their own benefits, but to maximise the overall benefit of all parties and distribute the benefit in a fair way.

Homo Foedus understands that their negotiating partner is smart and will not sign an agreement that would only benefit a single party."[28]

Even though there are positive sides to the way that dinosaurs protect their territory, the difference between the dinosaur and Homo Foedus is clear — and it is especially clear when it comes to their attempts at reaching a solution. Homo Foedus knows the same facts as the dinosaur, but he/she seeks a solution to the problem. When two members of Homo Foedus negotiate, it is as if they are playing for the same team. This creates a good foundation for the collaboration between a university and company.

What should you do if a dinosaur happens to be sitting at the other end of the table? It is possible to collaborate successfully with dinosaurs as well. However, do not make the mistake of laying down on the ground in front of a dinosaur; they will only crush you under their feet. The most important point is to remain cool and composed. Do not try to challenge the authority of a dinosaur, since that will only agitate them further. However, be ready to act firmly at times when you should not be flexible. A dinosaur cannot act like a "human", but a human can act like a dinosaur. In fact, the only thing that a dinosaur respects is another dinosaur.

Try to avoid any situations where, e.g. the lawyers of a university and company have to battle one another. Since the lawyers are not responsible for the success of the collaboration, they do not stand to lose anything even if the collaboration is aborted altogether. On the contrary, after killing a project, the lawyer

28 Lappi, T (2011)

can proudly tell her/his superiors that he/she was able to thwart yet another unfavourable agreement. To succeed, the key point is to make the dinosaur feel that the success of the collaboration will also benefit them as well. In this way, you can harness the dinosaur's powers for your own benefit. When a lawyer or administrator wants to find a solution, it can usually be found. A good strategy is to know the areas where you can be flexible if the need arises. However, do not reveal these areas beforehand; only reveal them when your negotiating partner asks you to do so. As a result, both parties can feel that they have won the negotiation.

12.3 The intellectual property rights of student works

It is of the utmost importance for the parties of a collaborative effort that involves a university and company to agree on who will own the results of the collaboration. This involves *intellectual property rights*, or *IP rights*.

Intellectual property rights can be roughly divided into two groups:

1) Copyrights (which are granted automatically)
2) Industrial property rights (which need to be registered)

For corporate collaboration in education, *questions related to copyrights* are far more common than questions related to *industrial rights*. Industrial rights are required if the works from a student course will result in, e.g. patentable inventions. These cases are rare, but not unheard of.

If the student works can be considered copyrightable works, then the students are entitled to the copyrights.

Any work that meets the *threshold of originality* can be copyrighted. The threshold of originality is met when an author creates an independent and original work. In practice, a work can be the result of a creative endeavour that is original enough that no one else could create something that is exactly the same. A work can be, e.g. a composition, photograph, computer programme, play, movie, drawing, painting or choreography. Many other types of results of creative endeavours can be defined as works as well.

The threshold of originality varies between fields. Meeting the threshold is affected by, e.g. the degree that practical matters define the shape of the work. Poems or compositions are virtually always copyrightable, while the designing of a chair requires a high degree of originality. The quality of the work or the hours that have been put into it do not define whether the threshold has been met as such.[29]

The copyright to a work is granted automatically to the author of the work — a famous furniture designer and a student who has created their first course work are both treated equally under the law. No formalities, such as registration or use of the © character, are required. It is advisable to include author's name in the work as well as the year that it was created. According to the law, the author is the person whose name is displayed in connection with the work, unless otherwise

29 tekijanoikeus.fi

indicated.If the work has many authors, each author is granted an equal copyright to the work, unless otherwise agreed.

A copyright is especially significant in *technological* and *artistic* fields, which result in concrete works. In comparison, copyrights are not as important in fields that are related to *business*. The reason for this is that the results of business student assignments rarely meet the threshold of originality. With respect to corporate collaboration, if the company will only utilise the results of the student work internally, then the economic rights that belong to the copyrights will not be violated.

As an example, think of a report that describes a company's new subcontracting organisation in both words and with diagrams. Is this report a copyrighted work? The old saying "you can't patent an idea" is also relevant when we consider questions related to copyrights. According to the Finnish Patent and Registration Office, "[a] patentable invention is a concrete embodiment of an idea: a device, a product, or a process or method for achieving that target. A device or a product is defined by disclosing its structural details or composition. A process or method is defined by disclosing its process steps. You can also patent a new way to use a product, process, method or device."[30]

The most valuable part of the work, the idea shaping the new subcontracting organisation structure, is not copyrightable. However, if the report includes, e.g. an image of the organisational chart, the drawing in question may meet the threshold of originality for a "work".

30 The Finnish Patent and Registration Office

If a company uses only the *ideas* of the students, it will not violate any copyright laws. But if it intends to publish the *chart* that the students have made on, e.g. the company's intranet or website, it will either have to receive the authors' permission or draw the chart again in a different way.

Despite what is stated above, please note that if a company thinks that a student work has value, the company should always purchase the copyright to the work from the students for itself. This helps the company cover its back and also create a credible corporate image. When the company purchases the copyright to a work, it also makes sure that it alone can apply for any industrial rights, such as patents.

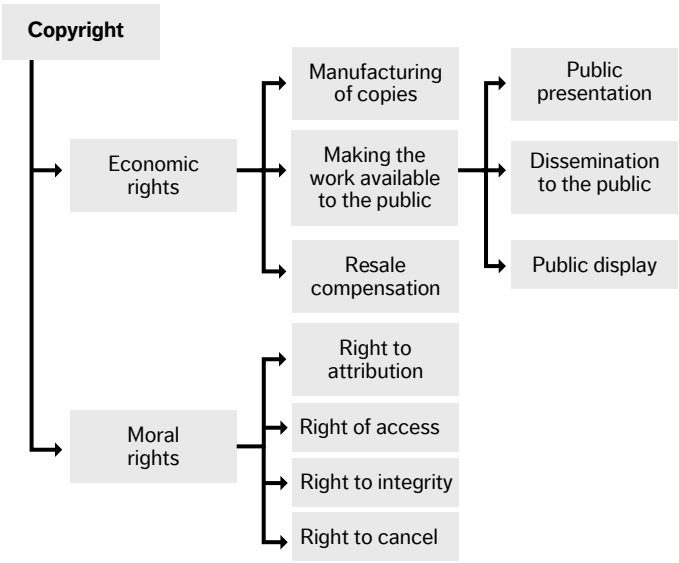

Figure 13.

The different aspects of copyright law.

The copyrights to the results of the student works are granted to the students

Let us assume that, as part of their studies, a group of students create course works for a particular company. In addition to the teacher, the course is also organised with the help of corporate representatives.

If no separate agreement is made regarding copyrights, who will own the copyrights to the results of the course?

a) The student group equally
b) The student group in proportion to how they have contributed to the work
c) The teacher
d) The company
e) The university
f) The university and company
g) The teacher and student group
h) The company and student group
i) The student group, company and teacher
j) The university, company, student group and students
k) Student work is public "property"

Student rights

The copyrights to the student works are granted to the authors of the work, i.e. the students themselves. If it cannot be clearly demonstrated which of the students of the group was responsible

for which part of the group work, then the rights to the entire work are granted equally to every member of the group.

An example: if the rights to the results of the student work were sold at 1,000 euros, each member of a four-person group would receive 250 euros. If the different parts of the work cannot be clearly separated into independent works created by the different students, then the student work is considered to be one indivisible whole. If in such cases even one of the students of the group would refuse to sell their rights, the transfer of the rights would not take place.

The course teacher's or thesis advisor's rights to the results

Organising the course, teaching the course or guiding the course work/thesis does not entitle the teacher to any rights to the created work. If the academic advisor of the student works, i.e. the teacher, would be granted a copyright to the student work, they would be evaluating their own work. This would mean that they would be grading themselves and would thus be disqualified from evaluating the work. An exception to this is if the student work uses (ready-made) materials that the teacher already owns the copyrights to. The teacher's rights to this material will remain intact and can also create partial copyright to the student work as well; this would be the case if, e.g. a student uses a photograph that the teacher has taken in their final work. To be granted copyright, the material that the teacher has produced must be concrete in nature. Just providing an idea or guiding the student's work does not grant the teacher copyright privileges.

The university's and company's rights to the student work

The university or company are not granted any automatic copyrights to the student work. At some universities, students grant a separate permission for the utilisation of their work in teaching activities when they register with the university. The teacher can, e.g. present an exceptional course work as a model for participants in the same course the following year. Even in such cases, the rights for the commercial utilisation of student works are left to the students themselves.

Can a company and university create an agreement on student works by themselves?

An agreement on the transfer of copyrights can only be made between the parties who actually own the rights. Since the rights to student works belong to the students, an agreement that is made between just the company and university would not transfer the rights. The students are not the employees of the university or in a position that is comparable to that of an employee, so the university cannot make any agreements on their behalf. Instead, an unbroken chain of title for the intellectual property rights that has been created with an agreement is always required — either from the students via the university to the company or else directly from the students to the company.

If a company wants the rights to the student work, how can it attain them?

A company can receive the rights to the students' work by simply *buying* them from the students. It is possible to purchase the rights either before the course actually begins or else after the course has ended. Usually all intellectual property rights,

i.e. copyrights and industrial rights, are bought at once. However, please note that any industrial rights are only valid after the company has registered them. The company and student can also follow the company's standard agreement procedure, e.g. the payment of a royalty. Since the student is only at the beginning stage of his/her career, she/he will not usually receive a very large fee or royalty.

Purchasing the rights to student works after the course

Purchasing the rights to student works *after the course* has ended is a very common practice in, e.g. design-related fields. The teacher guiding the course and the company agree together that the course participants will create a student work either by themselves or in groups on the topic that the company has assigned. Providing the assignment for the course can either be free of charge or paid for by the company — different fields have different practices. In return for its money, the company receives the opportunity to see several student works. If the company then wants to utilise one or several of the works, it purchases their rights from the students. The transfer of rights agreement will only be made between the company and students, and the price of the work is left up to the parties. The university representative can, of course, tell what has been previously paid for certain types of works, but the university's advice does not bind the parties in any way. If the student and company cannot agree on a price for the student work, then the rights are not transferred. However, it is very rare that no deal is made, since it is a great honour for a student if a company wants to buy the rights to his/her work. The end of this book contains a model transfer of rights agreement.

Purchasing the rights to student works before the course

Even *before the course begins*, the company and university can agree that the company will automatically receive the rights to the student works that are created during the course. Since the students are the original owners of the rights to their own work, they must be transferred to the company with a transfer of rights agreement either directly or through the university. The benefit of this approach is that the both the students and company will know the purchase price of the student works beforehand.

The simplest way to handle the situation is to have the students sign the transfer of rights agreement before the course begins, which then transfers the rights to the future works to the university. After this, the university has the opportunity to transfer the rights to the company. This means that a minimum of two agreement are required:

1. The transfer of rights agreement that is signed by the students transferring the rights to their work to the university.
2. The agreement between the university and company, where the university transfers the rights to the student works to the company.

The transfer of the rights from the students to the university must be implemented on a voluntary basis. This condition is fulfilled if the course is voluntary for students or if they are allowed to choose an alternative method for completing the course in question (e.g. a written assignment). Almost without exception, most students will choose the option that is based on corporate collaboration.

The agreements can also include a clause that the purchase of the student works for a certain price is an option that the company can use if it wants to. This lets the representatives of the company see the level of the student works first and then decide whether they want to pay for the rights to the work.

Non-disclosure agreements and obligations of secrecy

Non-disclosure agreements, or NDAs, are used to protect the confidential information of an organisation. Where a transfer of rights agreement focuses on the copyrights to a certain work, a non-disclosure agreement prohibits the parties from disclosing any of the company's or organisation's information that could harm the company if it fell into the wrong hands. The signing of a non-disclosure agreement is often required by a company before it can allow its representatives to discuss matters pertaining to the company with people from outside the company.

The obligation of secrecy for university employees

All employees of Finnish universities are subject to the obligation of officials to handle business secrets in a confidential manner.[31] If a company so requires, the university employee can also sign a separate non-disclosure agreement with the company. The signing of such an agreement is not a given and must be agreed upon on a case-by-case basis.

31 Act on the Openness of Government Activities, 21 May 1999/621, section 24, subsections 20 & 21.

The obligation of secrecy for students

The students in a course are not in an employment relationship with the university, so the university representative cannot sign a non-disclosure agreement on their behalf. If the company wants the students to sign a non-disclosure agreement, each student must sign the agreement separately. As with the transfer of rights agreement, signing the non-disclosure agreement must also be voluntary for students. Students who do not want to sign the agreement must be provided with an alternative method for completing the course. A written assignment that is completed internally within the university is a good solution for this kind of situation as well. It is highly advisable for the company to show the non-disclosure agreement to the university before it is shown to the students. In this way, the university representative can see the non-disclosure agreement beforehand and ensure that it is reasonable for the students. Another good method is to use the university's pre-existing model non-disclosure agreement (presented at the end of this book).

Things to remember with a non-disclosure agreement:

1) Avoid including an automatic contractual penalty in the agreement. A contractual penalty means that the beneficiary receives a specific sum every time that the agreement is violated — even in such cases where no financial harm is caused to the beneficiary.
2) The students should sign the non-disclosure agreement individually.
3) The duration of the non-disclosure agreement is usually limited to a maximum of three years.
4) Any conflicts should be resolved before the Market Court. If the Market Court does not have jurisdiction over the case, the matter should be taken before the district court rather than a court of arbitration.

The district court or Market Court is often the more economical alternative for conflict resolution than the court of arbitration. A final decision on intellectual property rights or related contractual disputes can be received quickly from the Market Court: their decision cannot be appealed to the court of appeal, and presenting the matter before the Supreme Court always requires a leave to appeal. There can be flexibility when it comes to deciding on the court that will resolve any disputes if the agreement is otherwise beneficial to both parties. In any case, if there is ever a need to initiate a judicial process during educational collaboration, then the situation is already so catastrophic that the form the trial would follow would not have much significance at such a point.

When should a company and university prepare an agreement in writing on the course collaboration?

- Always if any money is exchanged between the parties;
- Always if copyrights or other intellectual property rights are transferred between the parties.

Instructions for course planners

1) Agree with the company on how they will participate in the course. If any money or rights exchange hands, always prepare a written agreement on the collaboration (see the appended model agreements).
2) Inform the students in the study guide (or on other similar information channels) that the course includes collaborating with a company and that the company will receive the students' intellectual property rights. An ideal situation is one in which the students already know the scope of the intellectual property rights that they would be asked to transfer when they are deciding whether to participate in the course.
3) At the beginning of the course, inform the students about the contents of the course and go through the transfer of rights and non-disclosure agreements that the students are to sign. At the same time, you can also include a quick info session, lecture or workshop on intellectual property rights, depending on what your course schedule permits.[32] After this, ask your students to sign the agreements.

32 More information for students can be found at, e.g. copyright.aalto.fi/en

12.4 The publicity / concealment of theses that are created for companies

Theses differ from the other methods of collaboration between universities and companies. The publicity of theses is based on law, and this is why they are public even when their creation is funded by a company.

For those who are interested in the publicity of theses and the basis for this, the following section focuses on the matter in more detail with respect to different laws.

The discussion on the publicity practices of theses entered a new level when, on 28 January 2004, the Ministry of Education recommended that all universities should ensure that all theses are made public. The different universities and higher education institutions reacted in different ways to the recommendation. Some took it as a strict order, while others continued to conceal theses in the same way as they had done before. The Finnish Council of University Rectors has attempted to clarify this complex situation by issuing an opinion that also recommended making theses public domain. The Finnish Council of University Rectors is not a court whose decisions must be enacted, but the opinion of the Council embodies the universities' common intent and interpretation of the Act on the Openness of Government Activities. [33]

When considering the judicial basis for the publicity or concealment of theses, one must understand that if the publicity of

33 The most recent statement of the Finnish Council of University Rectors, TUTKIMUSHANKKEIDEN SOPIMUSPERIAATTEET ("The contractual principles of research projects", available in Finnish only), UNIFI recommendations, 9 February 2015.

a document is based on law, it is public — despite what a university, company or student desires in an individual case. The same holds true the other way around. If the concealment of a document is based on a binding legal provision, the university, company or student cannot demand that it be made public.

The laws that are used to inspect the publicity of theses are the **Constitution of Finland**, **the Act on the Openness of Government Activities and the Universities Act**, as well as **the Copyright Act**.

The Constitution of Finland

The publicity of theses is based on section 12(2) of the **Constitution of Finland**, according to which documents and recordings in the possession of the authorities are public property, unless their publication has for compelling reasons been specifically restricted by an Act. Everyone has the right of access to public documents and recordings. But do theses belong to the group whose publication requirement has been restricted by an Act?

The Act on the Openness of Government Activities and the Universities Act

The exceptions to the main principle of publicity that is specified in the Constitution of Finland are presented in the **Act on the Openness of Government Activities** (21 May 1999/621, section 24, subsections 20 & 21).

When considering the applicability of the Act on the Openness of Government Activities, we must also consider the **Universities Act**. According to the Act, the confidentiality of the activities pursued by universities are governed by the

provisions of the Act on the Openness of Government Activities concerning the confidentiality of the activities of authorities.

The Universities Act specifically refers to subsection 1 of the Act instead of to subsection 2, where the criterion for the applicability of the Act on the Openness of Government Activities would be the use of public authority. The university is comparable to a public authority when it comes to the publicity requirement, even if an individual university's structure, such as that of Aalto University, resembles a foundation or some other type of private university. Even the Act on Universities of Applied Sciences, 14 November 2014/932, contains the same reference to section 4(1) of the Act on the Openness of Government Activities as the Universities Act.

According to the Act on the Openness of Government Activities, secret official documents are documents that contain information on a private business or professional secret, as well as documents containing other comparable private business information, if access would cause economic loss to the private business.

According to the Act, secret documents are also documents concerning the basic materials for a thesis or other scientific study, technological or other development project, or the assessment of the same, unless it is obvious that access would not cause inconvenience with respect to the completion of the dissertation, study or development project or their exploitation, to its appropriate assessment or to the person carrying out the research, nor to the person commissioning the study or development project.

The research plan, research materials or thesis can contain an invention that can be protected with intellectual property

right protection: a patent, utility model or registered design protection that can be used to protect the possible design of the thesis. When applying for a patent, the invention must be kept secret until the patent application has been submitted to the registration authority. Before the registration has been initiated, the invention can only be presented to parties who have agreed to maintain the secrecy of the invention. A design can be protected in Europe within 12 months of the publication of the design, but if one wants to register the design in, e.g. China, the registration must be done before publication.

According to the Act on the Openness of Government Activities, research plans, research materials or theses must be handled as confidential material, i.e. they must be kept secret until the desired intellectual property right protection registrations have been applied for. After this, there are no barriers to publishing the thesis, i.e. the thesis can be made public once the patent application has been submitted. The intellectual property right registration process can delay the publication of a thesis. At several universities, the creation process for a thesis includes peer evaluation of the work, meaning that other students evaluate the student's research plan. If the student is planning to patent their thesis or to apply for some other form of protection, they must inform the academic advisor of this well in advance so that the matter can be taken into account in any practical arrangements.

A thesis is considered published when it has been submitted for its final evaluation. There have been proposals that, if the thesis is only evaluated by a person who has committed themselves to confidentiality, the publication moment can be considered to be the moment when the thesis is accepted. If the student is considering registering the intellectual property rights

protection for an invention or design that may be contained in the thesis, they should consult with a specialist patent attorney or design protection expert before submitting the thesis for evaluation.

The Act on the Openness of Government Activities would seem to provide the opportunity for keeping a master's thesis confidential if its publication would harm a company's possibility of utilising a master's thesis commissioned by said company. Therefore, a business secret that is included in the thesis would form the basis for the confidentiality of the work. However, the opinion of Finnish universities is that business secrets should not be included in theses. Business secrets can be included in the background material of the work, and this material can be kept secret. Some university administrators have suggested that the evaluation of a thesis can only take into account the material that is public, i.e. non-confidential.

The Parliamentary Deputy Ombudsman has made a decision on the matter when resolving a complaint that concerned the activities of the Helsinki University of Technology on 12 January 2002. In the matter in question, the university had demanded that the part of a student's thesis that was to be evaluated must be made public in its entirety. The student complained about the matter to the Parliamentary Ombudsman. The Parliamentary Deputy Ombudsman ruled in favour of the university. In connection with this decision, the Deputy Ombudsman provided a general opinion on the matter: "I find Helsinki University of Technology's practice on the publicity of theses justified on the basis of the publicity principle that is contained in section 12 of the Constitution of Finland. Publicity promotes the scientific evaluation of theses and thus also teaching on a sufficiently broad basis, as well as other types

of evaluational activities." The Parliamentary Ombudsman is the highest supervisor of legality in Finland along with the Chancellor of Justice. Even if a decision by the Parliamentary Ombudsman does not correspond to an enforceable court decision, respect for the constitutional interpretations of the Parliamentary Ombudsman is so high that the courts would very likely end up making the same interpretation. *(As a note, the Parliamentary Ombudsman is responsible for the supervision of legality along with their two Deputy Ombudsmen. They act with the same authority as the Parliamentary Ombudsman and decide on the matters they have been presented with independently.)*

The Copyright Act

According to section 1(1) of the Copyright Act (8 July 1961/404, amended 24 March 1995/446), a copyright is granted without exception to the author of a creative, independent and original work. When a student is the author of a thesis, the rights that are described by the Copyright Act are granted to the student. One right that is granted to the author is the power to decide on the publication and publishing of the work. This means that the Copyright Act does not deal with the *publicity* of a work, but only with the *publication* and *publishing* of a work. The special provisions of the Copyright Act, such as the right to quote other works, which is important for scientific work, only apply to published works.

A work is made public either by

a) Publication

- A work is considered to be in publication if it has been legally made available to the public.
- For publication, it is enough if one copy of the work has been made available to the public (with one library copy, for example).

b) Publishing

- A work is *published* when copies of it are distributed to the public. In connection with publishing, the Copyright Act refers to multiple (plural) copies of a work. This is why the Copyright Council [34] in its statement 1989:4 noted that placing one copy of a work in a library for loan does not mean that the work has been published.
- A published work has also always been made public.

Based on the Copyright Act, the student can decide whether to have a work that meets the threshold of originality made public or published. If the thesis has been made collaboratively, such as a movie, the participants must agree at the beginning of the project that every student will make their share public and also publish it. This means that a student who has created a film set that meets the threshold of originality cannot prevent the use of the film that has been created collaboratively as a public thesis, even if the student in question decided to prohibit the release of her/his work at some point.

34 The Copyright Council issues statements on the application of the Copyright Act. The statements are in the form of recommendations. They do not legally bind the courts of law, any persons requesting a statement, or any counterparty. In practice, the Council's statements possess a great deal of significance, since they are based on expertise that focuses on copyright practices.

The university can decide on its degree requirements by itself, and the universities have agreed that they will not accept any theses other than those that are public. To implement this publicity requirement, a thesis must be published at least in such a way that it is made available to the public in a university library. This means that the theses that are public in the way that the universities require can only be published works.

According to the Copyright Council's statement (1989:4), once a student submits their thesis for evaluation, the student has given permission for its publication within the scope required for evaluation by the higher education institution.

The concealment of a thesis leads to its rejection

After the aforementioned statement by the Copyright Council, a clear position has been adopted, according to which only such a work or part of a work that is public can be evaluated and approved as a thesis. This means that a student who forbids the publication of their thesis on the basis of the Copyright Act cannot have their work evaluated and thus approved. Therefore, while the student does retain the right to decide on the publication of their protected work in accordance with the Copyright Act, a thesis cannot be evaluated if it does not fulfil the university's requirement for the publication of theses. In addition to publication, the universities recommend openness and have even begun increasingly to require that theses be published in the university's electronic publication archive (e.g. Aalto University's Aaltodoc publication archives). This is also guided by the *Open Science and Research Initiative* of the Ministry of Education and Culture.

To quote the late General Adolf Ehrnrooth: "You need to explain to a Finn why something is done." Universities are scientific communities, and the scientific community believes in the openness of information. All knowledge is built upon prior knowledge. The scientific community also corrects its ideas by critically evaluating all scientific achievements, teaching and research. The evaluation of an individual person — even a professor — is just an opinion unless it is subjected to the evaluation of an open scientific community. A student's thesis is both their first scientific work as well as a sample of the level of teaching at a university. As such, it must be made public so that a wider community can evaluate the work and, when necessary, continue it. In this way, both the legal protection for students as well as the principle of the transparency of science and teaching can be realised. If the work were to remain secret, it would be impossible for any external parties to ascertain whether the student's work has been evaluated in a fair manner.

A good example of the importance of making the evaluation public has to do with the master's thesis written by a former member of parliament, Jari Vilén, at the University of Oulu. Twenty-seven of its 45 pages had been copied word-for-word from other works without any source citations. [35] The advisor of the work was aware of the plagiarism, but still proposed that the work receive the grade *magna cum laude approbatur*, [36] which back then was the second-highest grade. The other evaluator of the work at least demanded that the grade be lowered. If the

35 The account of the University of Oulu on the master's thesis of Jari Vilén, 2 January 2002.

36 Magna cum laude approbatur means "approved with great praise".

thesis was to be kept secret, it would be practically impossible for an external party to evaluate the level of the work.

The Aalto University School of Business has traditionally featured a great number of theses that have been commissioned by companies. When the previous concealment practices were given up in 2004 many people were concerned about whether the number of corporate master's theses commissions would begin to dwindle. The fear was misplaced; companies continued to commission theses at the same rate as before, and the structure of the theses followed either option A or B.

a) Students have prepared two reports on their thesis, one for the university and one for the company. The university version includes all details that affect the evaluation. The report for the company includes its business secrets as well. This has required some extra work from students, but the concise separate report has been quite useful for companies. In this way, the activity is also conducted on a legally sustainable basis. The contents of the corporate report are left completely up to the student and company. From the perspective of learning, writing a concise corporate report alongside the thesis also develops the working life skills of students.

b) The business secrets of the company are left out of the thesis that is to be evaluated and published, and included in appendices that are not published or evaluated. The version that includes the appendices is provided solely to the company. While this may seem like a fairly logical approach, it is more unclear than option A, as some academic thesis advisors insist that the appendices be made public as well.

The permission for the publication of the thesis is tacitly included in connection with the publication of the grade of the work.

Despite this, universities should also remind their students of the publicity of theses. At the same time, it should be noted that the publicity of the work does not mean that it can be freely used by anyone. The rights to the commercial utilisation of the thesis still remain with the student.

Students have also been instructed to discuss what information is necessary for the evaluation of the work well in advance with their thesis advisor.

It is true that in some fields, business secrets form such a large part of the thesis that it is impossible to remove the confidential parts. The discussion on the matter continues, and new guidelines will be made in the future as well. The law may also be changed. With respect to the current situation, I can present the following summary:

a) If a university only approves public works as theses, the university is acting in a lawful manner and is on solid ground when it comes to the openness of science and teaching.

b) If a university approves either permanently or temporarily concealed works as theses, it is on much shakier legal ground.

The implementation of the publicity of theses in practice

In a survey that was published on 4 February 2015, Kari Lilja evaluated how the publicity of theses is implemented in practice.[37] According to the survey, approximately 45 per cent of the university employees who responded to the survey

37 Kari Lilja's "working paper" on the results of the survey on the publicity of theses had not yet been published at the time of writing.

were ready to conceal a thesis if there was cause to do so. The large number of persons who supported concealment came as a surprise to many people.

The survey was sent to universities, universities of applied sciences, hospital districts, 23 of the largest cities in Finland, the central organisations of the entrepreneurial and business sectors, and the student unions of the universities of applied sciences. The organisations were asked to further distribute the survey to their members.

The survey received responses from 11 universities. The number and position of the respondents varied: some universities only submitted one response from, e.g. the rector's office, while at other universities the results of the survey were disseminated to different faculties, just as the survey creator had hoped.

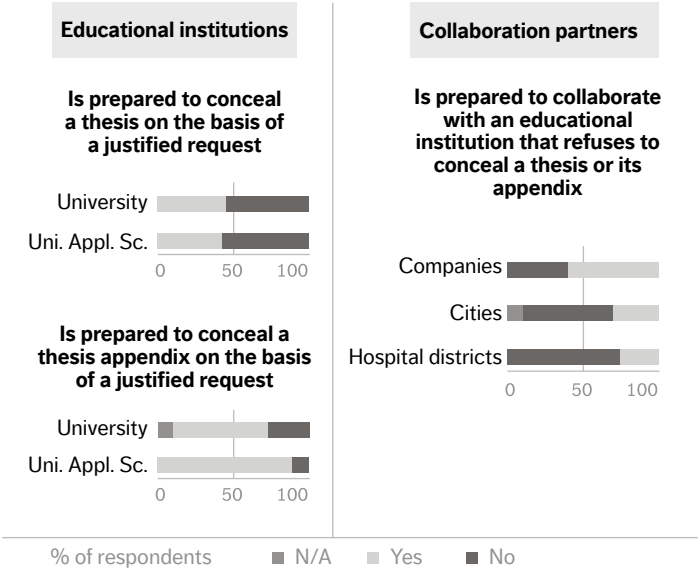

Figure 14.
The readiness to conceal theses and their appendices (Kari Lilja 2015).

Almost half of the universities reported being ready to conceal a thesis, even if officially every university has committed itself to the publicity of theses. It is clear that the publicity practices between the universities are not unified — or that the guidelines have only partially been met. At many of the universities, there apparently was no university-wide decision or even a recommendation regarding the concealment practices for theses. Opinions can vary greatly, even between faculties at a single university. For example, the University of Helsinki, the largest university in Finland, was only planning to create a university-wide recommendation on the matter in 2015.

The other significant question that the survey focused on was whether a collaborative party would refuse any thesis-related collaboration if the educational institution in question would not agree to conceal the thesis or its appendices. Surprisingly enough, many companies were more understanding of the requirement for publicity than most public bodies. Only 40 per cent of companies said that they would refuse the collaboration if the work or some of its parts could not be kept secret. The more understanding attitude of companies compared to public bodies was based on the idea that if, e.g. any sensitive matters (e.g. prices) could be left out of the thesis itself, then there would not necessarily be a need to conceal the entire work. The answers also highlighted another possible practice: producing a separate report or other set of materials solely for the use of the company alongside the thesis. In this way, the work proper could be made entirely public.

A summary on the publicity of theses [38]

According to the perspective of the Ministry of Education, the Parliamentary Deputy Ombudsman and the Finnish Council of University Rectors, all university theses should be made public. The basis for this is the legal protection for students and the transparency of the evaluation of theses. Within Finnish universities, individual faculties and departments possess a large degree of autonomy for making independent decisions. If a faculty or department approves the concealment of a thesis due to the demand of a student or company, the party in question takes a considered risk to act against the common opinion of university rectors, the recommendation of the Ministry of Education, and the constitutional interpretation by the Parliamentary Deputy Ombudsman. What would happen in practice with the concealment of a thesis has not been tested, since as of this time of writing, no legal precedent on the matter exists.

A survey that was conducted in 2015 demonstrated that, in practice, the concealment of theses is possible in almost half of the universities in Finland.

38 Expert advice for the section on the publicity / concealment of theses that are created for companies was provided by Aalto University Legal Counsel (IP) Maria Rehbinder.

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14

Appendices: model agreements

Appendices: model agreements

The following appendices contain model collaboration agreements. The model agreements are general in nature, and they are not necessarily directly applicable to the activities of any particular Finnish university. The author and publisher of the book do not make any claims of copyright to the contents of the model agreements and allow the free use and modification of the model agreements, even without source and author attribution. The author and publisher of the book have licenced the model agreements for free use in accordance with the CC0 1.0 licence. This licence only applies to the model agreements that have been appended to the book. [38]

38 "The person who associated a work with this deed has **dedicated** the work to the public domain by waiving all of his or her rights to the work worldwide under copyright law, including all related and neighboring rights, to the extent allowed by law." creativecommons.org/publicdomain/zero/1.0/deed

1 Agreement for a customised student project for a company

The following agreement can be used if the student project is made solely for a specific company and if the company in question is to be granted full rights to the resulting materials.

1. Parties

The Parties of the Agreement are

_____ (University)

and

_____(Company)

The contact persons are_____(University)

and _____(Company).

2. The purpose and scope of the Agreement

The University commits itself to the creation of the following project:

- Student project contents
- Project duration
- Project group size

The research problem and schedule are defined in more detail in the research / project plan that is to be created at the beginning of the research work. The work of the students is guided by_____ university researcher_____.

3. The duration of the Agreement

This Agreement will enter into force once it has been signed by all Parties. This Agreement is valid until the project has been completed.

4. Funding shares and invoicing

In total, the direct costs of the project are:

_____ € (+ VAT)

Any other costs that are caused by the project (e.g. travel and daily allowances, phone expenses) will be invoiced separately from those invoiced by the commissioner of the project after the project has ended. The costs will be charged according to the actual amount. If these costs exceed €300 in total, separate approval must be received from the commissioner for the exceeding costs. If the project requires travel that takes place outside of Finland, the commissioner will reimburse the travel insurance covering the travel.

5. Schedule of payments

The University will invoice the total sum of the project once the resulting materials have been approved. The commissioner must notify the university in writing about any possible deficiencies with respect to the resulting materials of the project within 14 days of receiving the final report. Otherwise, the resulting materials will be considered approved.

Invoicing address:

6. Transfer of Party obligations

One Party may not transfer any obligations that are caused by the Agreement to any external parties without written permission from the other Party.

7. Ownership of and rights of use to the background materials and resulting materials

The Parties are obliged to grant, without compensation, the right of use to any such background materials that are necessary for the completion of the project tasks that are the responsibility of the other Party. Both Parties are free to decide on their own behalf what materials are considered necessary for the project.

If no separate agreement is made on the matter, all rights to the background materials will remain with the Party that possessed them at the beginning of the project. The ownership of and right of use to the resulting materials will be transferred to the commissioner of the project for a fee after the project has ended. The resulting materials constitute all materials that have been produced as part of the project and that have been transferred to the commissioner during the project. The University will ensure that all project participants transfer their rights to the resulting materials to the University, which will then transfer the rights to the Company.

If necessary, the project participants will sign a non-disclosure agreement.

Other terms and conditions

The following documents determine the project between

_____ (University) and _____ :

1) This agreement;
2) The general terms and conditions for student projects of the University (assuming that the University has prepared the terms and conditions in question);
3) The research or project plan for the project;

If there are any ambiguities or discrepancies between these documents, their primacy is determined by the order in which they have been presented above.

The one Party is entitled to cancel the Agreement if the other Party either does not fulfil or violates the provisions of the Agreement in some substantial manner.

The Parties agree to resolve any disputes that may stem from the Agreement through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with the civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

Agreement documents and the terms of the Agreement

Two identical copies have been made of this Agreement, one for each Party.

_____University _____ Company

Place _____

Date / 20 / 20

Signature Signature

2 Transfer of rights agreement 1

The agreement below can be used to transfer the rights of a student project group to the university.

1. Parties

The Parties of this Agreement (the "Parties") are _____ (the "University") and the researchers and students who have signed this Agreement (the "Researchers").

2. The purpose and scope of the Agreement

The purpose of this Agreement is to transfer the rights of the Researchers to the University and agree on the confidentiality of the _____ corporate project (the "Research").

The Agreement applies to the ownership and intellectual property rights and the right for the financial utilisation of these rights of the reports, surveys, databases, computer program, inventions and other results that are created during the Research, as a result of the implementation of the Research, or in connection with the Research.

3. Transfer of ownership rights, inventor's rights and copyrights

The Researchers who sign the Agreement hereby transfer the rights specified in section 2 as well as any alteration and forwarding rights to the University without any separate compensation for the transfer.

4. Disclosure of inventions and works

The author of an invention that is patentable or that can otherwise be protected must inform the University about the invention in writing without delay.

The author of a computer program must inform the University about the program in writing without delay.

5. Confidentiality

The Researcher agrees not to disclose any information that is related to the Research in accordance with the agreements that have been made between the University, the funders and the collaboration partners. The Researcher especially agrees not to disclose any confidential information about the collaboration partners as well as any information on protectable inventions.

In the case of publications, what has been agreed on the matter in the agreements between the University, the funders and the collaboration partners must be taken into account.

6. Duties of the research group leader/advisor

The research group leader must ensure that all the participants in the research project sign this Agreement. The research group leader must also provide instruction and guidance to the people participating in the research project on matters related to disclosure and publication.

7. Other commitments

The Parties declare that they do not have any other commitments affecting this Agreement.

8. Entry into force and duration of the Agreement

This Agreement enters into force after it has been signed by the Parties and is valid for the duration that the University possesses the above-mentioned obligations originating from the Research, as defined in section 2. As for the rights that are to be transferred, the effects are permanent.

9. Disputes

This agreement is subject to Finnish Law. The Parties agree to resolve any disputes through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

Signatures

Place _____

Date / 20

_____ (University)

Project leader/advisor

Signature
Name in capital letters

Student 1

Signature
Name in capital letters

Student 2

Signature
Name in capital letters

Student 3

Signature
Name in capital letters

Student 4

Signature
Name in capital letters

3 Transfer of rights agreement 2 — Agreement for the transfer of study-related rights of use for educational purposes

1. Parties

[Student name] _____, hereinafter referred to as the **Student**

[student number] _____

and_____, hereinafter referred to as the **University**.

2. The purpose of the Agreement

The purpose of the Agreement is to clarify the University's possibilities for using the works and performances as well as any recordings that have been created by the Student as part of the Student's studies in the basic activities of the University.

3. The scope of the Agreement

The Agreement applies to the works, performances or recordings that have been created as part of the Student's studies at the University or at another related university. The Agreement applies to use in the basic activities of the University. Basic activities refer to teaching and research as well as to any information, library, archive and artistic activities of the University. Commercial exploitation, i.e. any for-profit activity, does not fall within the scope of this Agreement.

4. Student copyrights

The Student retains the copyright to the written or artistic work as well as performance that she/he has created. Copyright includes, e.g. the right to be named the author and the right to manufacture copies of the work or make the work available to the public in an unaltered or altered form.

This Agreement does not limit the Student's own right to use the works and performances or their recordings or the Student's right to agree on the rights with a copyright organisation (e.g. Teosto, Gramex, Kopiosto, Kuvasto, Tuotos, Sanasto). If the Student wants to transfer the rights that are specified in the Agreement to some party other than a copyright organisation, the University's parallel right of use that is specified in this agreement must be taken into account and preserved. This Agreement does not affect the interpretation of the restricting provisions of Finnish copyright-related legislation (e.g. chapter 2 of the Copyright Act)

5. The limited rights of use that are transferred with the Agreement

The Student transfers to the University a parallel right of use that allows the University to manufacture a copy of a work, performance or recording (including recording the performance) that has been created as part of the Student's studies as well as the right to make the copy available to the public. The transfer of the right of use is gratuitous and only applies to the following non-commercial uses of the University:

- Teaching use
- Study-related festival and competition use that have been agreed upon with the Student
- Evaluations that are related to the work of the Student

Scientific and artistic research use (including any research other than what is conducted by the University): research use does not entitle a wider scope of quotation than what is permissible according to the quotation regulations of Finnish copyright legislation.

Archive and library use: the library has the right to publish the thesis or its abstract online and in other ways. Images that have been made by the Student and that have been taken from the published thesis may be included in the University's image data bank or archive and published on a University-run online service or in other ways.

Information and communication use: the University may use the works, performances or their recording in a context that involves the work or author in question as well as in any communicative activities that concern the activities of the University. The work can be used without separate approval from the Student only after it has been made public. The work has been made public when it has been submitted for evaluation, exhibited or publicised in some other way. If the work or performance has a duration, the University may only use a short clip of it for communicative purposes.

The University may hand over the rights that have been transferred to it only within the scope that is necessary for implementing the uses that have been specified in this Agreement. The University has the right to hand over the work to be used in the future as an aid in the evaluation of study attainments.

The rights of use that pertain to festival and competition use are valid for two years after the Student has ended his/her studies at the University. Otherwise, the validity period of the transfer is unlimited.

Any use of, as well as the terms for such use of the work, performance and recording, other than what are specified in this Agreement must be agreed upon separately with the Student.

The University commits itself to respecting the Student's moral rights to the performance, work and recording and to declare the Student's name in connection with the use of the rights in accordance with good practice. The University has the right to use only part of the recording or work if it is done in a manner that does not infringe on the author's professional or artistic value or reputation.

If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

6. The settlement of disputes

The Parties agree to resolve any disputes that may stem from the Agreement through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

7. Copies of the Agreement

Two identical copies of the Agreement have been made for both Parties.

Place and date _____

Student signature _____

Student name in capital letters _____

4 Transfer of rights agreement 3 — the transfer of rights after the course has ended

With this Agreement, the signatory transfers the copyrights to the group work _____that has been created in the _____course to _____(Name of the Party purchasing the rights). The copyright fee that is to be paid for the rights is €_____/ group work (gross). The sum will be divided equally between the authors of the group work and paid when every author of the group work has signed this agreement.

The copyrights that are to be transferred include:

- Manufacturing right
- The right to make the work available to the public
- Alteration rights
- Transfer rights

Signature _____

Name in capital letters _____

Date and place _____

The authors retain the right to include the group work in their own analogue or digital portfolios with attribution to the authors of the group work.

This Agreement will enter into force once it has been signed by every author of the group work. The Parties agree to resolve any disputes that may stem from the Agreement through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

If the payment of the copyright fees does not occur within 60 days of the signing of the Agreement, the rights will return to their original owners.

5 Non-disclosure Agreement (NDA)

In consideration of the disclosure to me by _____, or any of its divisions or subsidiaries (hereinafter referred to as "COMPANY") in connection with research project _____ , of various confidential, secret and proprietary information and know-how the confidentiality of which is of vital importance to COMPANY, I hereby undertake the following:

1 In this Undertaking, the term "Confidential Information" shall mean technical, commercial, financial or other information of COMPANY, whether written, oral or computer data, or whether ascertainable by the inspection or analysis of samples. Provided, however, that the term Confidential Information shall not include information which:

(a) was already known to me on a non-confidential basis at the time of disclosure (as evidenced by written documentation);

(b) is disclosed to me by a third party who obtained such information without any obligation of confidence; or

(c) becomes or is part of the public domain through no fault of mine.

2 I agree that the Confidential Information is the sole and exclusive property of COMPANY. Nothing in this Undertaking shall be construed as granting me any rights in or license to the Confidential Information.

3 I shall hold and treat the Confidential Information in the utmost and strictest confidence and shall use such Confidential Information only for the purposes as defined by COMPANY, and shall not make any other use of the Confidential Information without the prior written consent of COMPANY. I shall not disclose any Confidential Information to any third party, nor reproduce it without the prior written consent of COMPANY.

4 I shall return to COMPANY all Confidential Information (including copies thereof) upon COMPANY's request at any time or, at the latest, at the end of my potential work assignment with COMPANY.

5 In no event am I entitled to make statements relating to the potential cooperation with COMPANY without obtaining COMPANY's prior written acceptance thereto. Furthermore, I understand that I am not entitled to use any of COMPANY's logos or trademarks, or drawings or pictures of COMPANY products, in any material of mine or the COMPANYs represent without obtaining COMPANY's prior written acceptance thereto.

6 The obligations defined herein shall survive the termination of my potential work assignment with COMPANY and even though the evaluation of a possible business relation or other form of cooperation with COMPANY does not lead to any contractual arrangement. This confidentiality obligation is binding for three (3) years after the fulfillment or termination of this contract.

7 Any dispute that may arise of this agreement shall be handled at the

Market court of Finland according to the laws of Finland. If market court does not have jurisdiction in the issue, the dispute will be handled at the district court of Helsinki, Finland.

In Helsinki, on this _____ day of _____, 20

_____

Signature

_____

Name

6 Agreement on the creation of a thesis

1. Parties

Student

Name:

Address:

Company

Company name:

Address:

Business ID:

Contact person:

2. Background and purpose of the Agreement

With this Agreement, the Student and Company agree on the creation of a thesis. This Agreement is not used when the Student is the recipient of a grant that is used to fund the creation of the thesis.

The relevant parts of the Agreement can be used in a situation where the Student is in an employment relationship with the Company. This Agreement does not create an employment relationship between the Student and Company.

3. Thesis topic and description (appendix 1)

This Agreement is used to agree on the Student's thesis that the Student will create for _____ [fill in University name]

The topic of the thesis is:
[fill in the topic of the thesis in as much detail as possible]

The topic of the thesis is described in more detail in appendix 1.

4. The obligations of the Parties

The obligation of the Student is to create the thesis in the form that is described in appendix 1. The Student is solely responsible for ensuring that the topic has been approved by the University as well.

The Company is aware of the fact that the work in question is a thesis that is part of the Student's studies. The Company understands that the Student is not primarily a professional in the field and that the thesis may not be suitable for the purposes of the Company.

It is the duty of the Company to provide an adequate amount of guidance, time and other resources for the creation of the thesis.

5. Timetable

The thesis will be created between
_____[fill in the start and end dates here]

6. Fee, expense reimbursements and payment schedule

The Company will pay the Student a fee of
€ _____. [fill in the size of the fee in euros]

The fee will be paid to the Student's bank account
_____. [fill in the bank name and bank account number here]

The company will reimburse the following expenses to the Student
[fill in the expenses that will be reimbursed]

The payment schedule of the fee is as follows:
[if the fee is paid in instalments, fill in the necessary instalments in the table below]

Instalment	Date	Sum
1		
2		
3		

The Company that pays the fee will take care of any possible taxes and other payments.

7. Copyrights

The copyright to the thesis and other intellectual property rights belong to the Student who created the thesis.

The Company will receive a parallel right of use to the thesis for its internal activities.

If the Company wants any other rights to the thesis, it must agree on them with the Student separately.

8. The publicity of the thesis

Theses are always made public and the part that is to be evaluated cannot include any confidential information. If the work includes any business secrets or other non-public information, this information must be left in appendices that are not evaluated or in a separate report that is only provided to the Company.

9. Limitation of liability

In all cases, the liability of the Student is limited to the total sum of what has been paid. The Student is not responsible for any indirect or consequential damages or any damage that is caused by a third party. The Student does not provide any guarantee for the thesis or any other materials and is not responsible for its suitability for the purposes of the

Company. The use of all materials is the responsibility of the user. The Student is not responsible for ensuring that the thesis does not include any third-party materials that are protected by intellectual property rights.

10. Other terms and conditions

The Student's thesis will be evaluated at the University on an academic basis. The evaluation of the thesis will not affect the size of the remuneration that is to be paid to the Student.

11. Validity

This Agreement enters into force when both Parties have signed the Agreement and it remains valid until the resulting obligations of the Agreement have been fulfilled.

12. Disputes

The Parties agree to resolve any disputes that may stem from the Agreement through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

13. Signatures

Two identical copies have been made of this Agreement, one for each Party.

Student	**Company**
Place: _____	Place: _____
Date: ____	Date: ____
_____	_____
Signature	Signature
_____	_____
Name in capital letters	Name in capital letters

7 Student project agreement

1. Parties

Education provider:

(1) _____(University), Business ID ( );
(the "University")

Commissioner (the "Commissioner"),

(2) name:_____, Business ID:_____

2. The scope and purpose of the Agreement

This Agreement concerns the student project that is described in more detail in appendix x (project plan).

The name of the project that this Agreement concerns is: _____.

The project begins on _____._____._____. and ends on _____._____._____.

The University's contact person is _____, and the Commissioner's contact person is _____.

The University's general terms and conditions for study and education projects, which has been appended to this Agreement as appendix 1, will be applied to the Agreement unless otherwise agreed by the Parties in section 6 of this Agreement.

This Agreement and its appendices form the entire Agreement between the Parties. If there is any conflict between the Agreement and its appendices, the order of validity is as follows:

1) This agreement ;

2) The general terms and conditions for study and education projects of the University (Appendix 1);

3) Other appendices.

3. Payments

The University will invoices the Commissioner in the following instalments and on the following dates:

Instalment excluding VAT (euros))	VAT 24%	Invoice date

Invoice address and contact person for invoicing:_____

4. The duration of the Agreement

This Education Agreement enters into force when both Parties have signed the Agreement and it remains valid until every obligation of the Agreement has been fulfilled.

5. Disputes

The Parties agree to resolve any disputes that may stem from the Agreement through negotiation. If the Parties cannot reach an agreement, the Parties will bring the matter before the Market Court for resolution in such cases where the contractual dispute can be heard by the Market Court, as specified by the Act on Certain Proceedings, together with any civil dispute that falls within the purview of the Market Court. In all other cases, the matter shall be brought before the Helsinki District Court for resolution.

6. Additional terms and conditions

The Parties have agreed in writing to the following alterations to the general terms and conditions for study and education projects, which have been included in the Agreement as appendix 1 (include a reference

to the relevant section of the terms and conditions and the altered agreement text).

Appendices

Appendix 1 The general terms and conditions for study and education projects of the University

Appendix x Project plan

Appendix x

_____identical copies have been made of this Agreement, one for each Party.

Signatures

University

Place and date: _____, _____._____.20_____

_____

_____

Name in capital letters

Commissioner: _____

Place and date: _____, _____._____.20_____

_____

_____

Name in capital letters