Marjo Kumpula

AN EXCURSION TO PROJECT HATCHERIES

Students' experiences in multidisciplinary learning projects

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FOREWORD

The development of teaching methods is a topical challenge in universities of applied sciences. Higher education faces strong social expectations from the society as one factor of national competitiveness, also in terms of promoting innovation skills. Learning innovativeness in the context of higher education requires new methods and tools for learning. Innovation pedagogy, developed in Turku University of Applied Sciences, is an approach to learning that involves new ways of assimilating, producing and using information to bring about innovations. Multidisciplinary project hatcheries represent one method of innovation pedagogy.

This publication is meant to serve as a guide for teaching staff and students, introducing them to one educational implementation of innovation pedagogy – the project hatchery. The multidisciplinary project hatchery has been implemented since 2008. The nearly 500 first-year students in Turku University of Applied Sciences' Faculty of Technology, Environment and Business work in project hatcheries throughout the autumn term. The operational model is the result of collaboration between teachers and students, and the operations have been developed along the way, based on continuously collected feedback. The purpose of this report is to describe students' experiences and views on project hatchery work on the basis of hatchery reports written by students. A hatchery report is an account that each hatchery writes about itself once the hatchery work comes to an end.

This report aims to be an exploration into the world of project hatchery learning. I hope the report does justice to this method of learning and that you will find yourself engrossed by the students' experiences and writings:

Group work has become familiar during the project and the aforementioned method – someone invents something that is honed by someone else and perfected by a third – has proved to function well in practice, too.

The project hatchery was over and it was time for a sad farewell. And so they headed towards the inn for a pint of rich malty ale. And they lived happily ever after, always feeling proud of having belonged to hatchery number six. Or was it seven?

I would like to express my gratitude to all students who wrote and contributed hatchery reports! A special thank-you to the writers of the reports included at the end of this publication:

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❚ INTRODUCTION

For a long time, the traditional dichotomy between manual and knowledge work has also applied to learning-related studies. According to modern research on learning, however, knowledge and manual skills seem to represent the flip sides of a single phenomenon. In this sense, the concept of competence is useful, given that it does not make a distinction between knowledge and skills in the same way as the old notion of professional skills. Regardless of whether one studies information technology, an engineer's designing skills or the ability to discern customers' needs, what is of primary importance is the development of high-level expertise – not a division into knowledge and skills. (Eteläpelto 1993, 110–111.) Even on a broader scale, the issue seems to relate to a transition from information society thinking to a learning society thinking. A learning society is characterised by continuous professional (vocational) learning, the diversity of places where one can acquire new competence and the overlap and supplementary nature of different kinds of learning, also in the context of professional learning. (Kotila 2003, 21.)

The modern concept of learning rests on the idea that the interactive activity in which the learner actively participates is decisive in terms of competence development. Because of this, various forms of learning through doing have become more common at the same time. (Eteläpelto 1993, 109.) The nature of the duties of a university of applied sciences – i.e. pedagogy, regional influence and applied research and development – also emphasises functionality to a large extent. Working life does indeed need experts who are capable of action, production, development and innovation. (Raij 2003, 54.)

The employment of those graduating from a university of applied sciences is followed continuously. The focus of such monitoring lies on objective factors such as the unemployment rate of graduates and salary levels. The employment of graduates is also examined through subjective criteria – how individuals themselves see their work corresponding to their training in terms of the field, tasks and status. (Stenström et al. 2004, 110–111.) According to the study of Stenström, Laine and Valkonen (2014, 123), the labour market

status of university of applied sciences graduates seemed fairly stable, and 60% of their respondents were employed in positions that required a degree from an institution of higher education. The majority (79%) of the respondents in the aforementioned study perceived themselves as working in positions of expertise, meaning that the objective of universities of applied sciences – producing experts for labour markets – has been met fairly well. On the other hand, graduates' evaluations as to the working life skills provided by a university of applied sciences were a good deal more critical. The greatest shortages mentioned in this respect were the inability to perceive and manage big pictures as well as poor time management, problem solving skills and innovativeness, an inability to tolerate uncertainty and a lack of practical professional competence. (Stenström et al. 2004, 121–123.) This being the case, the need to increase students' working life skills through various means is quite clear.

The study by Virtanen and Tynjälä (2013) attempted to identify teaching methods that had proved useful with regard to learning skills for working life. They looked at study units that students had pointed out as particularly useful with regard to increasing their knowledge of working life. According to the results of the study, these study units had focused on the basic skills of one's own field, collaboration skills and an ability to work creatively and in an anticipatory manner in various situations. The nature of the teaching situation in these cases generated a low threshold for discussion and questions. The students perceived the lessons as inspiring and well-informed, successful in integrating both theory and practice. Sharing the previous experiences of students and teachers alike was commonplace. Also typical of these courses was the promotion of students' critical thinking by way of looking at issues from various perspectives or by searching for different explanations for the same thing. It therefore seems that students feel that study units implemented in this manner offer them concrete tools for activities in future work communities. The results show that students do not always need to enter working life to gain the experience and skills necessary for it.

The purpose of this report is to describe students' experiences and views on project hatchery work on the basis of hatchery reports written by students. Innovation pedagogy-based project hatcheries allow multidisciplinary student groups to work on a specific project throughout the autumn term. The report focuses on the examination of the following:

- How do students perceive multidisciplinary collaborative project learning?

- What do students think they learn through this method?

- What is the process of the students forming into a group like?

The report's theoretical section clarifies some of its basic concepts. Given that project hatchery activities represent one of the ways in which to implement innovation pedagogy, the report first briefly discusses innovations and innovation pedagogy. It then describes the project hatchery as a way of working. Learning in a project hatchery is, above all, collaborative learning and project learning, due to which these are explained in more detail. Since working as a group is an important aspect of hatchery work and its success, the report also examines the stages of group formation.

The final section of the report discusses the results of the hatchery reports written by students through the perspective of development stages and in the light of what students thought they learned in the hatcheries. A hatchery report is an account that each hatchery writes about itself once the hatchery work comes to an end. The hatchery reports therefore represent the views of an entire hatchery, rather than individual students. The number of writers varies according to the hatchery. Since it would be difficult for the entire group to produce this kind of text together, the hatchery reports are likely to be the output of a small group or one or two writers. The total number of hatchery reports examined was 45. To give voice to the students, the report's results include a great many quotes from students' hatchery reports.

> *This account focuses on the progress of our project – from the awkward beginnings to the awesome outcome and everything in between.*

> *The text was composed on the basis of our hatchery members' experiences and feelings.*

2 INNOVATION PEDAGOGY AS A STEP TOWARDS INNOVATIONS

2.1 INNOVATIVE ORGANISATIONS AS ENGINES OF WELL-BEING

Up to and including the government, Finland has stressed the importance of innovation as an enabler of the retention of the current standard of living and well-being. The competence and ability of organisations and individuals to produce ideas and process them into innovations plays a key role in this. (Pirilä & Konkka 2013, 11–12.)

Innovations can be defined in a variety ways. According to the definition of Statistics Finland (2006), an innovation is a new or significantly improved product, service, process, marketing method or organisational method brought to market by an enterprise. However, this report advocates an approach in which the definition of innovation has a broader scope. Ruckenstein et al. (2011, 12, 16) define innovation as producing a new kind of value for society, an organisation, business enterprise or a group of people. According to Ruckenstein et al., value should not be viewed from a unilateral perspective but rather as, for instance, social, ethical or ecological value. (Ruckenstein et al. 2011, 12, 16.)

The studying and modelling of successful innovations attempts to bring about high-quality products and service concepts that increase competitiveness. In the 2010s, innovation activity has, to an increasing degree, expanded into service innovations in such a way that it emphasises openness, a user-centred approach, the dissemination of information and multifunctionality. Current innovation literature underlines joint development by experts from different fields and customers' involvement in development projects. (Vehkaperä & Pirilä 2013, 98–100.) In the corporate world, innovative people have the ability

to see beyond the established industry and day-to-day tasks of their company. They identify new openings for opportunity in the business environment's change situations (Ruckenstein et al. 2011, 12, 16). Every industry and field benefits from change and development.

Studies of innovative organisations have also tried to find the factors in their operating culture that would seem to be connected to innovation. The employee material of the Meadow research conducted by Tekes (the Finnish Funding Agency for Innovation), for example, indicated that working in groups and teams is a great deal more common in organisations that achieve innovations than in organisations that are less innovative. What is also more common in the more innovative organisations is the development of employees' own work. When comparing different industries and fields, the grades respondents give to innovation and productiveness are higher in the service sector than in the industrial sector. (Minkkinen et al. 2013, 14, 32.) According to the employer material of the aforementioned research, the information intensive industry is clearly more innovative than other industries, while the construction and mining industries are the least innovative. Interestingly, bigger companies are more innovative than small ones. (Aho & Mäkiaho 2013, 40, 44.)

Society has set high expectations for higher education as one of the nation's competitive advantages, also in terms of the promotion of innovation skills. By combining education, research and development work, we can advance regional influence and thereby contribute to innovation. Learning innovativeness in the context of higher education requires new methods and tools for learning.

2.2   INNOVATION PEDAGOGY

In recent years, discussions concerning educational development have underscored the fact that education aims not to transmit individual pieces of information that quickly become outdated or obsolete, but to produce transprofessional qualifications. Such qualifications include life-long learning, interaction and communication skills, cooperation skills, flexibility and learning how to learn. (Eteläpelto 1993, 112; Salakari 2009, 29; Nurmio & Turkki 2010, 48.) In this context, learning how to learn refers to the

conscious and flexible use of various learning strategies in different learning environments (e.g. Kauppi 2004, 208). Innovations skills likewise represent one key transprofessional qualification.

The educational system plays a central role in increasing the innovation skills of students and employees. This is why educational organisations should have the ability to change and adopt new methods. Even the success of the educational organisations themselves depends on how they succeed in this. (Salakari 2009, 14.) The provision of intellectual skills is one of the strong suits of the Finnish educational system and competence, too, has often been seen as the facts mastered by an individual. Working in groups, learning from others and the further processing of others' ideas have not been Finland's strengths, which is why they should be given increasing time as early as in school. (Juva & Hynynen 2011, 13, 17.) Poikela (2005), too, among others, has pointed out that the teaching contents in education should be created in such a way that the learner is able to integrate the necessary theoretical and practical information in the learning processes. The results of successful integration provide the student with information based on experience, the nature of which is highly permanent in comparison to information based on memory and removed from practice or experiences lacking theoretical understanding. (Poikela & Poikela 2005, 31.)

The innovation pedagogy developed in Turku University of Applied Sciences starts from the idea that innovative professional competence is an essential aspect of every profession and occupation. The objective of innovation pedagogy is to create added value to the student, working life, the university of applied sciences itself and to society at large. (Kairisto-Mertanen 2012, 10–13.)

The basic idea of innovation pedagogy is for graduates to learn and become adept at working methods that create new and renew operations as early as during their student years. Once they enter the job market, they will possess the knowledge, skills and attitudes that allow them to participate in innovation processes (Kettunen et al. 2013, 7). This requires long-term work, an appreciation of how practical working life functions and a trust-based operating environment that encourages development. (Hyrkkänen 2011, 8.) Innovation pedagogy is a learning approach which provides a new definition on how information is assimilated, produced and used so as to

bring about innovations. The production of information and innovations requires discussions between competencies, multidisciplinarity. (Juva & Hynynen 2011, 16.)

The birth of innovations requires the freedom to try new ideas and to make mistakes. Students should also always have time for reflection. In line with the spirit of innovation pedagogy, questions are often more important than answers. A learning environment based on innovation pedagogy enables the practical application of theory and introducing even the surprising situations of working life into the sphere of teaching. What needs to be developed in innovation pedagogy are the operating methods and environments that promote the achievement of its objectives. (Räsänen & Kyllönen 2013, 13–14.) These include multidisciplinarity, flexible curriculums, students' participation in research and development work and encouragement towards entrepreneurialism and initiative (Kairisto-Mertanen et al. 2012, 71).

In innovation pedagogy, learning and teaching methods are linked creatively in such a way that the students take responsibility for their learning and actively strive to achieve their learning objectives. When they graduate, the students are innovative and capable of various development tasks in working life, given that, in addition to professional competence in their own field, they have the innovation competencies desired in working life. These innovation competencies allow the students to take part in organisations' innovations processes. Innovation competencies are taught during their studies by way of applying theory to practice. (Penttilä ym. 2013, 12.)

3 THE PROJECT HATCHERY AS A METHOD OF INNOVATION PEDAGOGY

Project hatchery working is a method developed in Turku University of Applied Sciences' Faculty of Technology, Environment and Business by which students are familiarised with multidisciplinary project work from the very beginning of their studies. The method is included among the educational research, development and innovation methods of innovation pedagogy. The multidisciplinary project hatchery has been implemented since 2008. (Niittymäki & Seppälä-Kavén 2014.)

The faculty's nearly 500 first-year students work in project hatcheries throughout the autumn term. In the autumn of 2013, there were 45 of these project hatcheries. Each hatchery is composed of 8–11 students. All of the hatcheries are multidisciplinary in the sense that they include students from each degree programme: automotive and transportation engineering, mechanical and production engineering, design, construction and civil engineering, industrial management engineering, professional sales, business logistics and environmental technology. The hatcheries teach students how to work in a multidisciplinary way – a reality in the majority of workplaces these days.

The hatchery is a mandatory 3-credit course for the students and it is graded, as any other course, according to a scale of 0–5. In addition to an assessment performed by teachers, a student's grade for this course is based particularly on the evaluation provided by student tutors and project managers, as well as a self-evaluation and peer assessment. (Niittymäki & Seppälä-Kavén 2014.) The development of students' innovation competencies in the hatcheries are gauged by measuring a student's innovation competencies at the beginning

and end of the hatchery. The competence indicator was created and developed in the Innokomppi project[1], and tested for the first time in the project hatcheries of 2013.

The objectives of project hatchery work are many. In summary form, the project hatchery's learning objectives are for the student to:

- become adept at collaborative learning and work,

- develop independent working skills,

- learn how to work in a multidisciplinary group and get to know students from various fields,

- develop his or her innovation skills,

- begin forming the networks necessary in working life and studying,

- increase his or her project work skills,

- improve his or her presentation and interaction skills.

In other words, one important objective in addition to the development of students' innovation skills is the creation of a good and inspiring study environment in which the students pull together. The project hatchery is carried out in such a way that the hatcheries are led by teacher and student tutors. The student tutors themselves have completed a hatchery earlier and work in their second hatchery as group instructors with their own learning objectives. Each student tutor is responsible for one hatchery. Given that each teacher is in charge of 3–4 hatcheries, the student tutors play an important role in the success of hatchery activities.

In the project hatchery, a multidisciplinary group of students works on a specific project throughout the autumn term. The hatchery prepares a project plan, poster, hatchery presentation and, finally, the hatchery report, all according to a binding schedule. The posters are put on display in the school's hallways, and there will be a vote on the best poster. Great importance is put on the hatchery presentation given at the end of the autumn term in which every hatchery presents its own work to a panel and audience in an auditorium.

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1.   See http://innokomppi.turkuamk.fi

The panel is composed of the student and teacher tutors. Given that the presentations are also expected to be innovative, many of them have included videos and plays made by the students. The best posters and presentations are also awarded. More detailed descriptions of project hatchery activities can be found in *Innovative Professional Competences from Multidisciplinary Learning Projects – Handbook for project hatchery tutors*. (Niittymäki & Seppälä-Kavén 2014.)

The topics of project hatcheries have formed a large number of different assignments, the commissioners of which have included companies, public corporations, EU-funded projects, sports clubs, charities and regional development operators. Some examples of hatchery topics include the development of a commissioner's service operations, the organisation of an event, a charity campaign and regional development from the level of a housing cooperative to the future planning of a city district. (Räsänen & Lyytinen 2012, 43.) Following a project hatchery, the students have excellent qualifications for taking part, if they so desire, in a research hatchery, in which the tasks are closely associated with the research, development and service activity projects of the university of applied sciences. In addition to innovation pedagogy, project hatcheries involve a great degree of collaborative learning and project learning.

3.1 PROJECT HATCHERY – COLLABORATIVE LEARNING

Social interaction is at the foundation of every organisation. A student's growth and development are always connected to his or her social environment. In peer collaboration, a person mirrors his or her own notions and views and learns to understand the notions and views of other people. Discussions create common understanding, which leads to a positive and instructive atmosphere. Peer collaboration is, above all, the kind of cooperation that is characterised by shared objectives, solid commitment and mutual trust and dependency. Activities are likewise evaluated and developed together. In other words, the question involves particularly the learning of social skills (Helakorpi 2001, 130–131) and the interaction and team skills also required in working life. Given the complex problems of working life and society, the knowledge of one expert is inadequate. Rather, the modern specialist also has to be able

to communicate and work efficiently with other specialists and customers. (Piekkari & Repo-Saarento 2001, 308–309.) Every student needs interaction and cooperation skills in, for example, their studies and recreational activities.

Collaborative learning is not a novelty in teaching: its roots can be traced all the way back to the late 1800s, when the American John Dewey presented ideas on students' joint learning and peer collaboration. In Finland, collaborative learning started to make real headway in the 1990s. Rather than referring to any particular teaching method, collaborative learning is an umbrella term for those pedagogical methods that are based on specific common rules for the activities and learning that takes place in small groups. What is required in all of these teaching methods to achieve a successful outcome is the interaction of each group member and what is referred to as positive interdependency, in which the success of one student also translates into the success of other students. (Sahlberg & Sharan 2002, 10–11; Hakkarainen et al. 2005, 287; Harjulahti & Metsävuori 2010.)

The opportunity to learn cooperation skills during studies often depends on how valuable an objective it is considered in the organisation of teaching. Cooperation is not learned automatically as a by-product of other learning or by merely discussing it. Cooperation is best learned through cooperating. (Koppinen & Pollari 1995, 8–9.) The renewal of curriculums and collaborative learning often progress hand in hand; seeing learning in context and as a communal effort can change curriculums. However, writing curriculums in a new way alone is not enough. Rather, the idea should take shape in actual work. (Hakkarainen et al. 2005, 14.) Koppinen and Pollari (1995, 8) give an apt description of collaborative learning. According to them, collaborative learning should be organised in such a way that the learner:

- can practise collaboration by working in different groups,

- commits to the work, cooperation and the achievement of a learning outcome,

- is responsible for his or her own learning and the learning of fellow students,

- learns interaction and group work skills in addition to facts, skills and problems solving,

- takes care of the special responsibility given to him or her,

- evaluates and develops his or her work.

The most effective collaborative learning occurs in a learning environment in which knowledge is shared, interpreted and constructed together and in which students also learn from one another (Viljamaa 2010, 100–101).

3.2 PROJECT HATCHERY – PROJECT LEARNING

Project activities, alongside communality as the second basic tool of learning, create the foundation for learning based on experience, which helps students to develop into innovative future successes who have the ability to learn and who have assimilated a network-like way of working (Hakala & Hakkarainen 2010, 38). Project studying is an increasingly wide-spread pedagogical solution for the cooperation of education and working life. This enables coming up with and trying new methods of implementation (Vesterinen 2003, 80).

Project learning refers to a relatively long-term process built around meaningful problems that integrates the ideas and concepts of different scientific disciplines and branches of knowledge. The aim is to give students problems and development tasks that are as genuine as possible. In project work, students set goals, brainstorm, collect and analyse information, interpret results and draw conclusions. What is important is the communication of ideas to others, doing things together and, also, the evaluation of learning. (Harjulahti & Metsävuori 2010, 27.) This kind of learning is therefore fairly communal and tied to a certain context. It is also experiential and requires problem solving skills (Vesterinen 2003, 82). In project learning, students work on assignments and solve problems in an environment in which their knowledge will be applied to in the future. This allows them to understand the purpose and use of knowledge and to learn through the use of knowledge. Another significant skill is learning how to operate differently in different situations (Eteläpelto 1993, 127).

In project learning, the teacher's role is, in addition to instruction, to plan learning assignments as close to real life as possible. Some common denominators have been distinguished between genuine learning assignments. Genuine learning assignments seem to be characterised by the following:

- students perceive them as meaningful or rewarding,

- the assignment's connection to a genuine situation is apparent,

- the assignments include a social aspect and communality,

- doing and the model that guides activities can be made visible,

- the new level allows for conceptualisation and the drawing of conclusions,

- trying students' own ideas and constructs becomes possible. (Eteläpelto 1993, 127–128.)

The result of project learning is often some kind of a concrete outcome. It can be an exhibition, for example, or an event, a business development plan, the refurbishment of a space, a presentation or a study. Projects are often also publicised in one way or another within the community or in the media, thereby often increasing the motivation of those working on it. (Koppinen & Pollari 1993, 51, 55.)

Helakorpi (2001, 180) describes the didactic characteristics of a project as follows:

1. The project's starting point is the student's own reality and experiences. The project relates to, for instance, the student's own activities, study or work community.
2. The project attempts to structure the wholeness of the reality across disciplinary boundaries, for example.
3. The project is characterised by an exploratory and experimental nature. The student works actively alone and in a group.
4. The project is often a communal effort. It is often carried out in a group and involves various parties.

The principles and objectives of collaborative learning and project learning are so close to one another that the work methods can be combined into collaborative project learning. At its best, collaborative project learning combines the key objectives of both work methods, i.e. practicality, responsibility and peer collaboration, initiative, integrity, a process-like nature and an orientation on results. (Koppinen & Pollari 1995, 54–59.)

3.3   A GROUP'S DEVELOPMENT STAGES IN PROJECTS AND COLLABORATIVE LEARNING

Given that organisations use group and team group to an increasing degree, there is a need to study and understand how groups form, develop and change. Understanding a group's development stages in projects and collaborative learning is also important for all the participants. Although various theories on a group's development stages have been presented, the theories do contain certain similarities. Well-known researchers who have studied the development stages of groups include Bass and Ryterband (1979), Woodcock (1979), Glass (1996) and, perhaps the most well-known of all, Tuckman (1965). The development stages of a group presented by the aforementioned researchers are listed in Table 1.

TABLE 1. *The development stages of a group (Brooks 1999, 85).*

Bass ja Ryterband	Woodcock	Tuckman	Glass
Forming mutual trust	Undeveloped group	Forming	Birth
Communication and decision making	Experimenting group	Storming	Childhood
Motivation and productivity	Integrating group	Norming	Adulthood
Supervision and organisation	Mature group	Performing	Maturity
		Adjourning	

What these theories have in common is the view that a group's operation contains various stages and that these stages along the course of the group's existence resemble one another: a new undeveloped group matures to work together in a constructive and productive manner. From a practical point of view, it makes no difference what these various stages are called. What is important is for a group itself to be able to recognise its stage along the continuum of development. (Brooks 1999, 82; Mullins 1999, 465–456; Robbins 2003, 220–222). Naturally, the development of a group does not always progress with this linearity. Rather, the stages may overlap, in which case they may be difficult to distinguish from one another (Koppinen &

Pollari 1993, 35). All groups go through various group forming processes, the observation and evaluation of which may facilitate the group's operations and the achievement of its objectives. The achievement of a group's objectives is, indeed, largely dependent on the success of the group work. (Poikela 2003, 59.)

Subsequent studies (e.g. Gersick 1988, 1989; Ginnet 1990) have shown that not all groups progress according to the foregoing stages. It has been suggested that in temporary groups, with a clear point of conclusion and schedule, the group's stages differ from those presented above. This is also probable in groups where the roles of the group's members are clear from the very beginning and where the group's operating environment does not change. Connie Gersick's (1988) "punctuated equilibrium" model does indeed challenge the traditional stage models. It has been tested in several natural work groups, and according to the results, a group's performance stage includes quiet phases and rapid leaps of development. Figure 1 shows the main features of the model in question.
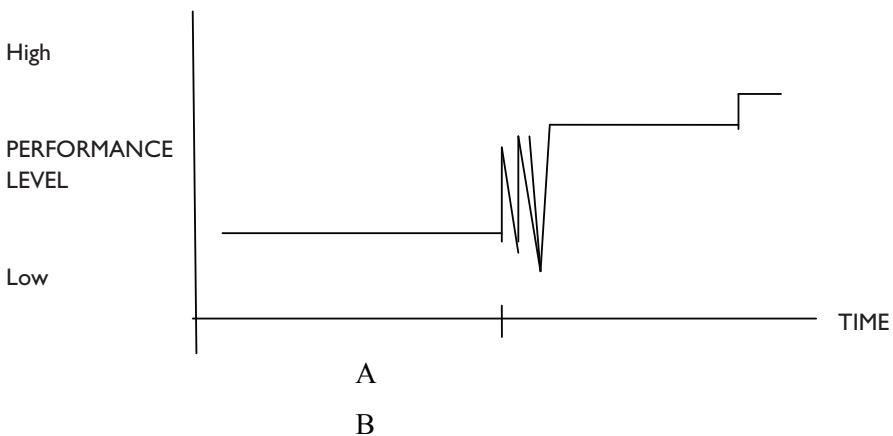
FIGURE 1. *The punctuated equilibrium model (Robbins 2003, 222–223).*

What is significant about the model is the midpoint transition phase: regardless of the duration of the assignment or task, the transition occurs at the point where half of the time available for the project has been used. The midpoint transition resembles a group's storming stage as explained by Tuckman (1965), for example. In Gersick's model, the group's performance may vary to a great degree during the midpoint transition. After this storming stage, the performance rises to a new level.

Innovative teams and groups have also warranted individual studies. According to these studies, what is important in innovative teams is an atmosphere that supports innovation. The team leader's role in this is significant. The dimensions of an atmosphere that supports a team's innovativeness seem to include:

- a joint vision and target,

- the safety of participation,

- an orientation towards the task and quality,

- group norms that support innovation. (West & Farr 1990.)

The group's clear vision and target promote innovativeness, because they allow the group to reflect various ideas against the targets. The vision and target must be sufficiently challenging, yet attainable. The participation of each group member is encouraged and, if the atmosphere is safe, people have the courage to propose even wild ideas. Group norms have to do with, for instance, the attitudes by which ideas are approached and how the group goes about its work. (West & Farr 1990.) The course of a good group meeting (Piekkari & Repo-Saarento 2002, 315) is described in Figure 2.
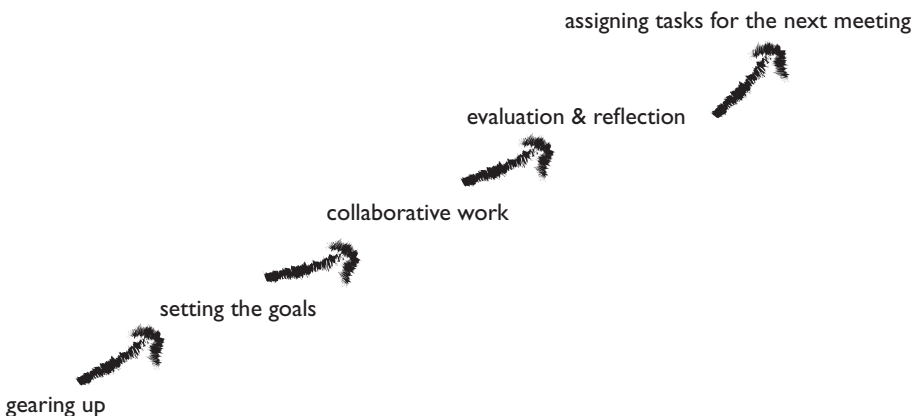

FIGURE 2. *The course of a good group meeting (after Piekkari & Repo-Kaarento 2002, 315).*

Of course, group meetings may also fail, due to a variety of reasons. A group's leader plays a key role in the group's success. He or she usually presides over the meetings, guides decision making, monitors group dynamics, reigns in adverse behaviour and ensures that each group member does his or her part. It is important that every group meeting has an agenda and a target of what should be achieved. The group leader's role may be to serve as a source and developer of cooperation and team spirit rather than a strict supervisor. There are diverging views of group leadership. While some consider it important that the leader stays the same, others are of the opinion that leadership can rotate. (Helakorpi 2001, 123–124.)

The following section of this report discusses students' experiences during the course of project hatcheries according to the order of a group's development stages (Gersick 1988). The discussion is based on hatchery reports. The report relies on a great many direct quotes from the hatchery reports out of a desire to make the students' experiences and growth process visible, particularly from their own points of view. The final section of this report also includes three hatchery reports in full.

In other words, the conclusions drawn in this report are based solely on hatchery reports. In other respects, the activities of project hatcheries are evaluated in a variety of ways. The personal grades of students are influenced by the assessments of the teacher, student tutor, often the project manager and the peer assessments of other hatchery members as well as by self-evaluations. The hatchery's effect on the development of innovation competencies is also evaluated. The success of hatchery work is also gauged by other means, such as the poster voting and the evaluation of hatchery presentations. Furthermore, commissioners usually provide hatcheries with feedback.

4 PROJECT HATCHERY EXPERIENCES AS TOLD BY HATCHERY MEMBERS

The hatchery reports written by the project hatcheries open up an interesting view into the activities of project hatcheries. The hatchery reports were written for the first time in the autumn term of 2013, when they replaced the final reports written in previous years. Students received fairly broad instructions in terms of the reports (Appendix 1), out of a desire to not to curb their creativity. Issues were indeed discussed with varying intensities in the hatchery reports. The interest in them relates precisely to what the reports tell about the experiences and thoughts of their authors.

4.1 INITIAL STAGES OF HATCHERY WORK

Prior to the start of project hatcheries, the students had been divided into multidisciplinary groups. The placement within the groups was random, although the goal was to get representatives from each degree programme in each group. Given that the faculty has clearly more male than female students, it was also ensured that each hatchery would include at least two or three female students. Collaborative learning allows for the formation of groups according to different criteria. In this case, we aimed for what are referred to as heterogeneous learning groups (Kagan & Kagan 2001, 44). When the project work began, the air was thick with questions and uncertainty.

> It was a dark and stormy night. About a dozen students of the university of applied sciences were selected for project hatchery six by way of an unknown algorithm.
>
> The end of August arrived and school began. All kinds of new and exciting things were to be expected. We were informed about one of our major projects for the autumn – hatchery work. We arrived at the first meeting intrigued,

not quite sure of what to expect. At first, we received general information related to project and group work. We were also told what "project hatchery" means. As regards the actual commission, we had to wait a while and that stirred up all kinds of emotions. The atmosphere was also somewhat tense, given that this was the first major group work for many of us and with a complete bunch of strangers at that.

On a beautiful Friday morning in August, our project hatchery embarked on its journey towards its distant destination. Everyone made it there, more or less enthusiastic and tired. We met up in the classroom, and after ten minutes of icy silence, someone opened their mouth and the project was officially up and running.

Our shared journey in the wondrous world of the project began on 30 August, as our teacher tutor gathered us poor little students into the classroom, where we told one another something about ourselves on small pieces of paper. We wrote down our dream professions and the country we might want to work in one day. How exciting! Our group consisted of all kinds of students, all studying something different. In the first meeting, we got to know one another to some extent and the teacher asked questions about what a good project is made of. In an enthusiastic frame of mind we were left waiting for the next meeting when we would be given our assignment.

The students' preconceptions about the hatchery varied. The majority looked forward to the coming autumn and hatchery work in a state of uncertainty, but some of the students also had a negative attitude towards it. Although the students had spent less than a week in their new school at this point, students from the years above may have made negative comments about hatchery work to the new students.

The hearsay flying around before the hatchery began was pretty heavy, due to which my own preconceptions were very negative.

Some students saw the new way of learning as a good opportunity from the very beginning or after the hatchery activity had gotten to a good start. For some students, this became clear towards the end of the hatchery and, as is the case with most other study units and courses, there are always those who are not fond of some particular method of implementation.

Yet this was one more mandatory course among the others, so what else can one do than see it through. And carry out a project of some sort while you were at it, that much was clear, but hardly anyone at that point was likely to understand the growth that would occur during the months to come and the emotions from one end of the extreme to the other as they were about to face them.

Great acts and open-minded approaches are expected of these ten novice students. As always before, there is an attempt to immediately weld these strangers together with rapid introductions and group play. And as always before, none of these students would remember the first thing about the project hatchery's other members after the first meeting.

After the introductions we selected the project manager, the deputy project manager, the person responsible for the group's visual representation and the secretary. Following the question "Who's going to be the project manager?" a hesitant silence ensued, as if some primal instinct for self-preservation had whispered into everyone's ear: "Run! Run, while you still can!" Proof that even the intuition of modern man sometimes hits the mark. After a hesitant pause, S., a first-year logistics student, announced that he/she would take on the job of project manager. They sometimes say that courage is only madness in disguise.

Hearing the topic or assignment of the project hatchery was an important moment. Some of the hatcheries were informed about their topic as early as during the first meeting, while some were told about in the second meeting or even later. Some of the topics were introduced to the group as a very broad theme indeed, which the group was then allowed to narrow down, while the topics given to other groups were more specific (such as those commissioned by companies). The master's thesis of Säynäjäkangas (2006, 106), which studied the topics of group work, indicates that interesting and topical subject matters have positive effects on performances. A thought-provoking, touching, everyday, familiar or, conversely, unfamiliar topic also proved to be a "positive" factor with regard to the work.

Today we would be hearing the topic that would cause us to either tear our hair out or which we would see through to the end as kings.

Examples could be heard everywhere, and everyone was hoping to get the best topic of them all.

The topic seemed very unfamiliar, but after an inspiring introduction it opened up and began to stir ideas and hopes. The group forming began and the topic had time to take shape in our minds for a few weeks. Our group also included a handful of exchange students who livened up and diversified our project hatchery.

The topic was interesting, and it seemed as if we had been given one of the best topics. After the initial confusion, everyone enthusiastically began to plan the project.

In collaborative project learning, the topic worked on should present a challenge demanding enough to require the efforts of all group members. Indeed, the learning assignments are usually "open assignments", meaning that there is no single right way or solution with which to carry them out and that the outcomes can be very different. This being the case, the teacher or tutor should make sure that he or she does not limit or control the group too much, and encourage the group to take responsibility for the assignment's independent performance. (Kohonen 2002, 353.)

At first it felt as if we would not have sufficient know-how of project work, marketing or video recording. But as the atmosphere became more relaxed and we began to divide the tasks, our respective roles and competencies began to take shape and everything fell into place as if by itself. Our group turned out to be practically bursting with ideas, positive and even wacky. Despite our different personalities and fields of study, we got along very well. We even formed some very solid friendships.

For one reason or another, a hatchery's topic may have been confirmed at a later date than the topics of other hatcheries or even change along the way. Such circumstances, in particular, required a tolerance for uncertainty and flexibility from the students. Given that situations change and problems appear without forewarning even in working life, growing a tolerance for uncertainty during one's studies will be beneficial, even if it may not feel very motivating to students at the time.

Following two rejected topics our hatchery was gripped by uncertainty, and no-one seemed to have a clear idea about what would happen next.

Instead, we started everything again and changed our goal. Fantastic! All the work down the drain, every plan back to the drawing boards, new groups for different tasks. But what else can one do but hold one's head up high and head towards new disappointments and vague objectives.

Our project's actual objectives remained fairly unclear for quite some time to come. In spite of that, we boldly started to familiarise ourselves with the available materials, both during our hatchery meetings and at home. Once our basic information on Kustavi and the topic were on a sufficient level, we grouped our topic into smaller parts and selected the right people to work on those. The smaller groups started tackling their challenges more or less efficiently.

Since teachers are responsible for more than one project hatchery, the students are expected to carry the main responsibility for the activities, with the support of their student tutor. In terms of a commission's success, the project managers selected by the hatcheries also played a major role.

4.2   TRANSITIONAL STAGE OF HATCHERY WORK

A great many hatchery reports speak to the accuracy of, for example, Gersick's (1988) suggestion of a group's midpoint transition or a certain storming phase (Tuckman 1965).

Come September's end, and our project was going nowhere. The poster team had been selected and the people responsible named, but after that, our project's development hit a dead end. In October, our hatchery began to show signs of some real action.

November proved to be the most hectic of our time, as we suddenly woke up to reality. Our project had been going on for the better part of two months, and we had hardly a scratch to show for it. It was time to take the bull by the horns and get down to serious work.

One successful week can change the course of the entire project. Even so, it felt in the meetings that we were unable to get the project properly back on track again. Perhaps we ran into a slump after the brisk beginning, or perhaps we just had other things on our mind.

At this point, the weeks seemed to flow by for some of us, but the "media group" spent its time planning the flyers. Generally speaking, there was not quite as much work to go around for everyone. The amount of work increased towards the end, particularly at the eve of the Market Hall's opening, when everyone was abuzz.

In everyday language, motivation often means that someone is interested or enthusiastic about something. Communities and groups can be considered to have motivation models similar to those of an individual. In studying, the underlying factors of good motivation on an individual level may include the student's thirst for knowledge, the need to be successful in one's studies, the goal of graduation, a desire to solve problems together or a need to show oneself all that one is capable of. Poor motivation, on the other hand, may be caused by previous bad learning experiences or a lack of faith in one's own competence. Motivation also often entails the concept of management. If an individual or group feels uncertainty and fear with regard to a situation's management, they may avoid the tasks and their motivation levels may fall. (Murtonen 2004, 79–81.) Fluctuations in the level of motivation were also visible in the hatcheries.

There is no motivation. These thoughts surely went through everyone's mind on that November morning. It was on this day that our members' enthusiasm for the project work hit rock bottom. We were unable to achieve anything at all, nobody said anything, we had been broken. This was the beginning of the end.

All this nonetheless washed away as we realised, in amazement, that the motivation shortage of a week ago was long gone. We began to plan and rehearse our hatchery presentation aimed at the other hatcheries, and it felt as if everyone had overwhelming amounts of motivation and enthusiasm for the presentation. Too much enthusiasm.

Rewarding tasks motivated work, particularly as the division of tasks between the various groups had been clarified and everyone had a genuine opportunity to influence the project's end result.

Academic freedom sometimes translates into students thinking that they need not participate in lessons. And yet, a student's presence in the group is an important prerequisite in collaborative learning methods. Students' perceptions about studying in an institution of higher education may also be traditional: when they attend lectures, the teachers just kind of pour their knowledge on to the students. If a great deal of interaction is added to a learning situation, students may even think that it no longer constitutes genuine learning at all. (Piekkari & Repo-Kaarento 2002, 310–311; Poikela 2003, 46.) The requirement of self-guiding may bring out resistance in students, because it is easier to complete tasks and assignments given by teachers than to take responsibility for you own actions and the actions of your group (Hakkarainen et al. 2005, 74). Students also come from a variety of environments and are different personas, with different attitudes toward work and responsibility (Koppinen & Pollari 1995, 44).

In the beginning, our beautiful and wonderfully cheerful student tutor was very happy with all members of the project hatchery, but this sympathy suffered some serious blows as our story progressed.

Many studies have revealed the fact that not all students perceive themselves as project workers. Yet in modern working life, nearly all employees are involved in projects, which is why the teacher in charge should try to motivate these students, too, to acquire project work skills. (Vesterinen 2003, 92.) Developing into an expert means joining and participation in the activities of different communities, when the assimilation of mere book learning no longer suffices. Sometimes, students are thought to gain motivation as if by itself and to take responsibility for their own learning, but this idea is too idealistic. Educational support structures that help the student are indeed necessary. The support of fellow students is important. (Lonka & Paganus 2004, 238, 246.) Many times, group activities include what can be referred to as free riders, people who do not commit to the task. Recurring discussions and guidance often attempt to pare down this phenomena. Each member of the group should make a contribution, even if the contribution of some may be bigger than that of others. (Melin 2010, 81; Hakkarainen et al. 2005, 43.)

As September progressed, it became apparent to all of us that there were free riders among us. They constantly slowed down our progress and left things undone, heaping the work on the shoulders of merely a few select ones. Somewhat discouraged by this, these few nevertheless bravely, if not chivalrously, continued to toil away with sweat on their brows in the name of "common good". A classic struggle between the forces of good and evil ensued. The people who understood that they must make an effort for the hatchery went to battle with their lances and swords at the ready; booking business visits and working on the poster, they tried to move the project along.

The completion of the interviews was helped along by the fact that some of our group members had made it their business to urge everyone to interview companies and reminded us of this very enthusiastically every Friday and even on our Facebook pages. This degree of dedication was indeed to a large extent responsible for our hatchery's success, given that it also rubbed off on other hatchery members.

Sometimes, the danger in group work is the fact that it is only ostensibly carried out as a group (Kettunen et al. 2013, 2). Therefore, tutors should not allow an assignment to be broken down into separate individual tasks that are forcibly joined together to form a single outcome at the end of the project. Since the incorporation of the results of partial assignments is often mechanical, the shared consideration of information and experiences will remain insignificant. The assignment may also face additional challenges brought on by the commissioner.

During the project, we became particularly aware of the extent to which a commission given by an external party can impact scheduling and the management of agreed matters. The filming involving the support person and the person in need of support, for example, had to be postponed by two weeks, since one them was sick. Another example is the slowness of the information flow when you still need to get in touch with the operator behind the commissioner and fail to do that within the given time. As soon as we had overcome these obstacles, we were once again able to proceed at full speed, or at least in second gear, and the final result was great.

Working with a community of entrepreneurs can be very challenging indeed, as became apparent to all of us when things fell through and we did not receive any quick replies from the commissioner.

The importance of the commission was also emphasised by the commissioner's representative, who visited the project hatchery in its fourth week to tell us why the commission had been given and what they wanted to achieve with it. It was at this point, at the latest, when everyone understood the importance of the topic and the reason for the commission.

The experts from working life are often so busy that communication in student projects is difficult. Sometimes, they may also use language that the students are unfamiliar with (Melin 2010, 81; Hakkarainen et al. 2005, 43). Students often have a more appreciative attitude towards assignments given by external commissioners than towards those given by teachers. This increases the students' motivation to perform well.

4.3   FINAL STAGES OF PROJECT WORK

During the final stages of the project hatchery, the posters were ready and evaluated in the popular vote, but the hatcheries were still busy not only with the completion of the actual project commission, but the preparation of the hatchery presentation. At this point, hatchery members had come to know one another fairly well. The project manager of one hatchery, for instance, used the following mind map to describe the members of her hatchery in the hatchery report.

Once the midpoint had passed, we realised that, should the project continue to progress at this speed, we would not be able to finish it on time. A furious final sprint began. We nonetheless decided to see the project through honourably and to develop our own, fantastic "final show", that mainly manifested itself as an entertaining presentation worthy of an Oscar, the Innogaala. It may be clear to everyone that when faced with urgency, you suddenly become very creative and productive.

The speech was largely improvised and still somewhat uncertain, but we had faith that everything would go well in the presentation. We saw quite a few presentations in Monitori [the auditorium] before it was our own turn. All of the presentations were very good and a couple of them of a quality from which it became apparent that some serious effort had been involved.
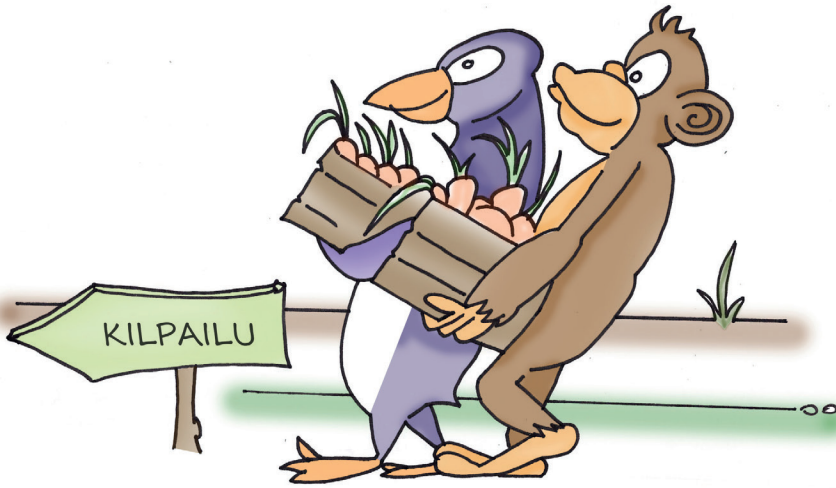
PICTURE 1. *Towards the contest (drawing by Kari Kesonen, hatchery 29).*

Videos were scripted, filmed and edited for hours on end. The filming was carried out on three different days in three different locations. One hatchery member secured a classroom for our use in which a picture could be projected on to the screen directly from above. This allowed us to perform the shoots against various backgrounds without an enormous amount of staging work. At least the scenes in which the hard-to-reach spruce salesman wanders about the desert and the jungle would have been difficult to produce without this screen.

Everyone supplied clothes and other props for the filming. The lighting was adjusted with the help of table lamps. Sound presented us with its own challenges, as the camera's microphone required a surprisingly loud speaking voice even at the distance of a couple of meters. The editing was carried out with the readily available and easy-to-learn but surprisingly wobbly Windows Movie Maker. The final video even went through noise removal in the hands of a hatchery member's brother. Three of the performers and one technology guy prepared the informative speech sections, light shows and their dramatic entrance and, but for the presentation, the project was as good as finished. Everyone took part in filming the video and everyone also performed in the video, regardless of their natural talent for acting. The video worked and the presentation that supported it was excellent – our presentation group's job really was worthy of its place in the finals. We ended up fourth in those finals.

As already mentioned, the project hatchery culminated in "the presentation". The presentation was to be spectacular and innovative – in other words, not pure PowerPoint.

The project's presentation was quite the spectacle. We decided to compose a little play on the topic, complete with a little Jesus, basketball, music, dancing, pictures, videos and what have you. I hope no evidence remains.

The project work had gone on from the beginning of September till mid-December. Table 2 contains information on the hatcheries' achievements.

TABLE 2. *Hatchery outputs during the autumn of 2013.*

Hatchery outcomes, no. of			
Credits	1,551	Videos	9
Project plans	45	Event organisations	11
Posters	45	Questionnaires, interviews	4
Hatchery reports	45		
Hatchery presentations	45	The establishment of a student guild	1
Brochures/materials/flyers	6	Space improvement	1
Activities in RDI projects	6	Fair department	1
External commissions	13	Design backpack	1
Plans, development ideas	12	Innovation competence measurements, self-evaluations received by student tutors, teacher-, self- and peer assessments, mid-term reports.	

4.4   LEARNED IN HATCHERIES

In collaborative project learning, learning outcomes need to evaluated on a minimum of three levels. On the first, or the me-level, the student himself or herself evaluates the achievement of his or her learning objectives. The second level is the group level and the third the commission level. The commission level involves the success of the given commission. At the end of the project, the student evaluates his or her own and the group's activities, learning and the achievement of objectives through reflection. The learning process is always a learning process of both the individual student and the group. (Vesterinen 2003, 86–90.) Continuous evaluation is also necessary during the project. By roughly the midpoint of the project hatchery, each student had evaluated his or her own and the group's activity in a mid-term report. At the end of the hatchery, the course was evaluated by way of teacher, student tutor, self- and peer assessments. As already mentioned, this report nevertheless discusses the hatchery reports alone.

The various objectives of the course, such as cooperation with external companies and other activities outside the school went well, on the whole, and each project member was personally in touch with the representatives of various companies. This developed individual performance alongside the group activities.

The one thing that is certain is that all of our hatchery members learned something new during this course. At least everyone is now sure to know what well-being at work consists of and how it can be maintained. Everyone has surely also learned something new about project-natured work and of scheduling and time management, in particular. By the time this final report is being drawn up, our hatchery has yet to present its results to our commissioner, but that will take place during this final week of our hatchery. We believe that our commissioner will also be satisfied with our contribution and is sure to be surprised by the number of entrepreneurs we reached and of the dedication with which we participated in this project.

What did I learn?

- film production, directing, script writing and editing

- flyer design

- ruling with an iron fist (remember sarcasm!)

- to network increasingly effectively

- to hold together people who were going to pieces

- to develop interesting ideas and carry them out

- to hold discussions with a customer and to communicate information

- to lose my free time to a project hatchery.

Every student is a different kind of learner, because his or her previous knowledge and conceptions, as well as his or her way of learning, have an effect on learning. People often find it easy to learn things they are interested in. The reason for this may be that the student in question has created well

structured internal models in connection with such things. In learning how to learn it would indeed be essential to develop an ability to get interested in just about anything. This would give the learner the strength to also get through the things that sometimes seem boring. (Hakkarainen et al. 2005, 203.) Learning in project hatcheries and project hatchery work were also perceived in various ways.

> *Some considered the project hatchery course a stimulating experience and a welcome addition to the sometimes numbing conventional course work. On the other hand, others thought that the course felt forced, whereas some were bewildered by the imprecision of the instructions. Selecting the hatchery's topic from amongst those suggested was generally perceived very positively. The selection of the topic allowed for the organisation of an event that interested everyone and the retention of that interest throughout the entire project. All said, the course is a fairly good addition to the studies, given that group forming, project work and group work skills are sure to come in handy in working life.*

> *And we are, after all, richer for the experience, in addition to the fact that our problem solving skills probably rose to completely new heights during the hatchery. As a final word, one could note that memories grow sweeter with time. After a few years, we might even come to have a neutral attitude towards the words "hatchery", "Friday morning" and "teacher tutor", without any degree of irritation worth mentioning. Time will tell. Also, we already feel compassion for next year's hatchery members, but if we could do this amongst all that hassle, they can surely do it as well. Our own example is just one among many and therefore not the whole truth. Project hatchery no. 9 signs off and bids you farewell, remarking that, well, this is one way of making sure that our credits are sufficient for the monthly study grants.*

> *We experienced feelings of success during the group formation, as we admired our beautiful poster, when we sniffed the brand new notebook and when we rehearsed our uproariously funny presentation. Our spectacular show gave our star reporter and star photographer a chance to perform some investigative journalism, while our presenters introduced our awesome output: the notebook.*

The project was truly challenging from the very beginning and there was no "main thread" to follow, but I think we performed very well, considering the time available for the project alongside other studies. The project was instructive, and it was a good idea to mix the different fields of study together.

Most hatchery reports noted that, in the end, the students had been happy with the project work and felt that they had learned a variety of things. Along these lines, in a previous student questionnaire concerning project hatcheries in 2011, we were able to identify three groups of respondents according to how the students perceived working and learning in the hatchery. In that questionnaire, 33% of the students felt that they had learned a lot and had a very positive attitude towards the hatchery, whereas 53% of students had a neutral and 15% a negative attitude towards it. In particular, students felt that they had learned project work and social skills (Kairisto-Mertanen et al. 2012, 76). In her study, Säynäjäkangas (2006, 109, 115) also noted that students perceived the teaching method of self-guiding small groups as effective and that there were two groups in terms of student satisfaction: those with a high degree of student satisfaction, and those whose satisfaction was on an average level. The two groups of student satisfaction could be explained through group work: successful group work led to a high degree of student satisfaction and unsuccessful group work to mediocre student satisfaction. The great majority of phenomena born in the groups (group dynamics and group work) were nevertheless perceived as positive.

The remaining sessions proceeded whilst filling in reports and clarifying the details that still needed to be clarified. Group forming, peace and love have been the leading themes, and on those fronts, our group has been more than successful.

When the project hatchery began, I was not at all keen on the idea and my attitude corresponded with this on the first hatchery day. Feeling a little hungover, I nevertheless headed towards the hatchery at eight in the morning. Due to the aforementioned reason, the first session indeed just kind of passed by, but as early as during the following session, my attitude towards the hatchery changed. From this point onward, the hatchery lessons kept on getting better and better, as people started to get familiar with one another. The Friday lessons became easier, because people were not afraid

to express their opinions and did not judge those of others. All in all, this project hatchery as a whole was not that bad at all :). Of course there were times when coming to school on a Friday morning seemed like an impossible idea. Usually we dragged ourselves there even on these occasions and, when we finally got to school, having had to get up so early no longer seemed like such a big deal.

What was learned

The hatchery members were given tasks to perform in small groups. We learned to divide the tasks within these groups and to even out the workloads between our co-workers. We learned to take responsibility for our own project. We also learned that e-mail as a primary channel to clarify matters is by no means the best channel for it. Everyone was urged to get on the phone, or to have a face-to-face discussion with the relevant person. This also proved to be effective. We also learned that even if you take care of your own part in an exemplary fashion, the result is not necessarily as exemplary. In other words, achieving the desired outcome demands continuous interaction between the various parties.

Not all knowledge can be found in a book. If you are tasked with finding something out, finding out that thing does not translate into googling it. We also learned that, to reach a shared objective, everyone's contribution was required. Although the contribution may seem small or insignificant, the puzzle requires every piece to be finished. We probably acquired some negotiation skills as well, since each hatchery member was in contact with external parties. We learned to work according to a schedule and delimit parts of the project in such a way as to stick to schedules.

In the end, everyone learned how to carry their responsibility or at least understood what that means. The teaching method was really quite terrific, and everyone was sure to learn skills that prepare them for working life.

The hatchery's chief took note of some clear signs of growth in a couple of individuals as the project progressed. I would therefore say that some genuine learning took place.

The learner's individuality, his or her previous experiences and a consideration of his or her perspective at that moment cannot be disregarded in learning. The various methods of learning produce different results in different learners. (Eteläpelto 1993, 132.)

In light of the hatchery reports, the students learned, above all, to work in a group, to function in a multidisciplinary project, to tolerate uncertainty and to understand how many factors have a bearing on a project's success. The greatest rewards were probably the experiences of success and the fine group dynamics brought about by successful group forming during hatchery work.

5 THIS IS HOW WE SAW IT: THREE HATCHERY REPORTS

This section of the report introduces the hatchery reports written by three students. The hatchery reports were written as the hatchery work drew to a close. For publication, we selected well-written and the most interesting accounts, which are here in their original form (excluding minor corrections related to linguistic style).

5.1 DARNED FINAL REPORT

What comes to mind from the word *project hatchery*? Right at the top, some dusky stable in Santa's workshops, where elves, their little fingers raw to the bone, fumble with presents to be doled out to the apples of the capitalist society's eyes. At the same time, big bad Santa is whipping some speed into the slowest of the elves while Mrs. Santa takes care of the tempo by banging on some bongo drums. Well, perhaps my imagination started to carry me off in the wrong direction. Of course, when listening to the opinions that the students of previous years have about the words *project hatchery*, the aforementioned conclusion is not too far off the mark. Let's stuff some small, round-cheeked freshmen into the drum of a colossal-sized lottery machine and let it roll. I am not sure whether the supervisor is on duty. After this, why not add to the joy of these snotty-nosed kids who are complete strangers to one another by giving them topics which, with a 95% probability, do not interest more than a 0.2 percent of this group composed of roughly ten members. Complement this with highly strict screening for absences and lateness. The mess is ready. I could not imagine a worse culture shock for the scaredy-cats crawling out of their mothers' back rooms who, because of their asthma, were even exempted from military service. In contrast to the parallel reality formed out of ones and zeros, this role play does not allow you to return to your previous save should

you not find the proceedings pleasant, and you will find yourself surrounded by the forces of evil.

I woke up to my own whimpering, covered in sweat, went to the bathroom and drank a glass of milk. I took a look at the time, realising that I still had a moment to doze off before the siren call of the alarm clock. They say that what doesn't kill you, makes you stronger. With this echoing in my mind, I shuffled over to our project hatchery classroom on the first Friday. The day started off with some general babble in the auditorium, after which we went to the classroom proper. I can no longer remember who was there for the first session, but only six out of ten had bothered to come over. Good luck with those three absences, buffoons, I thought immediately.

The hatchery's idea, then, was to divide up students from different degree programmes randomly and form groups out of roughly ten students previously unknown to one another. As far as our group was concerned, the lottery machine had suffered a block or a faulty feed, since no less than three of us were stately students of construction engineering. I smiled at my own joke and remained silent. We did not find out the topic for our group during the first meeting; instead we concentrated on the always-as-exhilirating-as-ever group forming games. After all the superficial strain, the group games were over. I may just have remembered everyone's name after it. The crowd seemed nice.

During our second meeting, we got to hear our topic. I was stunned. Our job was to organise a recreational day for a transport company. I turned that phrase around in my head a couple of times and nodded approvingly. In the group, the topic was welcomed with enthusiasm. Ideas in growing numbers started to emerge. Naturally, a mere topic is not sufficient for the arrangement of a good event, given that at the time, we had no idea about the kind of company we were dealing with. Therefore, our first priority was to familiarise ourselves with the company. Even before than that, however, we needed to find out the budget for the recreational day. These days, everything that's fun is either forbidden or prohibitively expensive.

At last, we had the facts on the table. It became clear that some twenty people, in addition to our own group, would be attending the recreational day. The budget was also relatively princely. Although, to my disappointment, I had to abandon my ideas of a lion tamer or the dancing girls from HC TPS. Finally, our selection for the first event of the day fell on karting. With the

right connections, we were able to secure a bus transport with which we could transport the good lorry drivers and their better halves from the company's garages to the kart racing circuit and back again. After this, we intended to organise some fun and games at the garages, followed by a meal served by a catering company. After the meal, the day's official part would be over and the recreationalists would remain amongst themselves to enjoy a sauna and some light beer-drinking. At this point, us students would return to our homes, which would not be such a bad thing. This is because the most tender among us might get the jitters seeing a burly Finnish man opening up a bottle of sauna "Kossu". Because these days, after all, getting upset and opening up about it in social media, and the spam mail reporting fueled by the yellow press, is all the rage. We did not risk it.

PICTURE 2. *Industrious tinkering in the hatchery (hatchery 38).*

In the end, everything went well. The feedback was positive, and everyone enjoyed themselves. We had also arranged for a programme and nibbles at the kart racing circuit, to ward off boredom at any stage. In the end, only a pinch over ten company employees took part in the recreational day. We

had nevertheless planned everything in a way that this made no difference to our arrangements. A sense of relief took over our group. A slight factor of added stress was brought on by the fact that the company in question was owned by our hatchery tutor. We joked about how every yawn during the recreational day would have a direct negative impact on everyone's grade. A nervous guffaw amongst our group revealed the wisdom in the age-old adage of how every joke contains at least a grain of truth.

In these final stages of the project, it is difficult to say what it felt like living with the prejudices at the beginning of the hatchery. In the hatchery's presentation, we wisecracked about only dead fish flow along with the stream. We've heard pained whining from many other hatchery groups about the strict absence rules, dry topics or otherwise total lack of doing things together. The Finnish mentality does indeed, during these darkening evenings, often take a turn from those sprightly midsummer parties, in which the nonsensical love of life all too often leads to those dire statistics and that burly Finnish yokel who, come Christmas, according to musical lore, drives his family out into the snow powered by Koskenkorva. I observed none of these signs in our golden hatchery no. 38. And now that it is over, I wish to underscore how our little hatchery brought joy and a sense of togetherness to each and every one of us. This brought a warmth to the cool autumn mornings reminiscent of that delicate ray of sunshine that in the spring announces the arrival of summer. I can honestly say that we had a good time.

5.2   THE RIGHT KIND OF CHEMISTRY

Once upon a time

Let's go back three months in time. At that point, on a beautiful and warm Friday morning, I started walking towards the school wondering what the "Project hatchery" marked under Friday in the timetable actually meant. I arrived at the classroom to see ten other people, who were strangers to me, standing around a big table, my first impression being that they must feel as uncertain and surprised as I was. Surprised as to what the day might have in store for us.

The first thing on the agenda was getting to know the other members. Our student tutor had laid a big pile of photographs depicting a variety of things on the table. Our task was to choose a picture that described what we felt at the moment. I remember selecting a photo in which a small squirrel sits on a tree branch nibbling a cone. I compared my feelings at the time to those of the squirrel, because I felt as tiny and innocent as it looked in the ways of the big world. If each of our project members selected a picture according to the same criteria I did, I would be willing to bet quite a large amount of money on everyone selecting now, after a three-month joint project and the time we spent together in connection with it, the lion or the grizzly bear. But what happened along that journey and how did a small squirrel grow into a thick-maned king of the jungle?

Getting down to business

"Project hatchery 24" was the name of our group, and we were tasked with arranging an event called Get Global III. The commissioner of the event was the international affairs unit of our school housed in its Sepänkatu campus. Immediately, we began to arrange a hilarious event to remember. During the first meetings, we were instructed to write down ideas about what came into mind with regard to the programme, venue or any other possible props related to the event. Our project manager's "pen-hand" went into overdrive at the moment when our student tutor urged us to first write everything down, whatever came to mind, including even the wildest of ideas. And in no time whatsoever, the paper began to fill up with dogs doing tricks, cruises, Robin and even Ron Moss himself.

After we'd had our laugh and shared a fair share of jokes, we decided to organise the event in the school's cafeteria, restaurant Teknika. The event was meant for the exchange students at Sepänkatu campus as well as for the Finnish students. Naturally, the first grave sighs some (read: all) of us gave were heard when the instructions mentioned that the event must definitely be of the non-alcoholic nature. After we'd shed our final tears on the subject, we realised that the event's non-alcoholic nature was a solely positive factor and, as young and wild little men and women, we saw this as a good opportunity to improvise and use our imagination to organise a great event to remember.

Laughter is good for you

Before the Get Global III event, we had planned and honed the event together in our hatchery meetings. In addition, we were in charge of other tasks such as marketing, making the poster and ticket sales. During all this toil, we hardly even noticed how solidly our group welded together and how well everyone got along with one another. Outside of school, our group got together several times in Bar Toimisto. The place in question functioned as the heart and soul of our group forming.

The way in which the chemistries between our project hatchery members met could even be called unique. Everyone could engage another in some banter and everyone had fun throughout the entire project. We were determined to carry over this positivity and the atmosphere spiced with humour to the event we organised, and we also succeeded in doing so.

We received a lot positive feedback for the event, and a large part of these positive emotions were the result of the event's cheerfulness and hilarity and its relaxed mood. The only piece of negative feedback likely originated with a member of our group known for a very interesting sense of humour, who had clandestinely slipped a note in the feedback box with the following opinion written on it: "A crap party with ugly ladies...". Oh well, it was only a joke!

The programme we arranged for the event was of the kind that made me personally genuinely disappointed that I was organising and hosting it, rather than being a guest. Of course, it was heart-warming and uplifting to see how, especially the exchange students, enjoyed what the event had to offer to their heart's content. The programme numbers consisted of a music quiz, a pantomime chain and an Alias group contest. The pantomime in particular was such an incredible spectacle that the undersigned almost jumped off the stage to join the fun!

PICTURE 3. *The pantomime challenge forced many contestants try to hold back their laughter (hatchery 24).*

Lots of plusses and a small minus

Naturally, whenever there is lots of good, there is room for something bad in between. To be honest, it must be said that I had to think hard to remember any setbacks or moments of failure and still I could hardly remember any at all, not even the slightest one. The first interesting mishap I could think of concerned the event itself, when we were told, just before the event began, that there were some people walking around the building looking lost. Having heard this we naturally sprang into action immediately, sending a couple of efficient and indicative human signposts to guide people to the cafeteria so that we would not have to go searching for our guests with the help of a party of trackers. In all other respects, everything went as planned, and after the event we were able to relax and enjoy the euphoric feeling brought on by the successful evening as a group.

PICTURE 4. *The guests were awarded with prizes, such as the wonderful Get Global -themed globes (hatchery 24).*

End of story and the beginning of a new one

Fun moments, new friends, an awesome event and quality time in great company – thus can one sum up project hatchery 24. Each group member gave their own fine contribution to the shared objective, and during the span of a project that lasted just over three months, the group's members grew from a little squirrel to a big and magnificent lion. These eleven lions are sure to keep on growling together after this great project, at least that is what I hope and believe. Opportunities like these–having the chance to work with people previously unknown to you–are exactly the kinds of opportunities that allow one to write great stories, stories that are fun to remember once they grow sweeter with time. It was fun to arrive at the project meetings every Friday morning, even if it might have hurt a little after the student parties held on Thursday evening.

5.3   A LITTLE CLASSROOM IMPROVEMENT

It was the last week of August. One day, rumours started spreading in the school about the work groups of project hatcheries having made an appearance on the lobby window. With great enthusiasm, students walked over to see whether their hatchery would contain some of their own friends or even someone from one of their own classes. Some did, some didn't. Whatever the case, everyone with their own mix of emotions waited for the last Friday of August, the day on which the hatchery would be kicked off.

Friday came, and our group had to drag itself to the school at sunrise. After the opening speeches, the groups were ushered into their respective home-rooms. Hatchery 7 was ordered into the IT classroom in the A wing. Everyone stole furtive glances at other hatchery members to see what they looked like. These glances continued in the classroom. Some had ended up in the same hatchery as friends, some had not. But this did not seem to bother anyone, because small timid conversations were already underway. Our teacher tutor arrived in the classroom in a hurry. The teacher seemed very enthusiastic indeed and everyone must have wondered what on earth was about to take place. The teacher talked about pile driving and engineering stuff. The engineers in our hatchery must have rubbed their hands in glee and hoped for a project right up their alley. But to everyone's disappointment the teacher then announced: "I have not yet decided the topic of your project, but I am considering a few options".

What on earth? Everyone was looking around. Nothing to it but to accept the fact that we would have to wait for the next Friday, perhaps to hear our topic then. Most of us had probably heard various horror stories about projects. We were hoping to get an interesting topic which did not include piles.

The first week of September arrived and with it our second hatchery session. Prior to the beginning of the lesson we stood in the hall wondering about our topic. The corners of everyone's mouth took a swing upwards when we heard the topic of our future project (even those of us who, for various reasons, had stayed up rather late on Thursday night). Our topic was the refurbishment of an empty classroom on the old side of the school building. Our teacher gave us a totally free hand to realise ourselves. Compared to the topics of many other groups, our topic sounded fantastic.

Time to get down to business. Our student tutor started shouting out various roles and asking for volunteers. Luckily enough, the project manager was found relatively quickly and painlessly. All the other roles, too, were divided in the spirit of good cooperation. Everything seemed to be going smoothly. No-one needed to be ordered into any group, and everyone took part in the implementation in good spirits from the very beginning. At the end of the lesson, we went around to take a look at the classroom to be refurbished, P011.

First look

A somewhat tired and confused group of people trudged down the spiral staircase in the school's echoing stairway. Our group was being led determinedly by a small, talkative and overwhelmingly enthusiastic man. I myself followed at the tail end. I did not yet know anyone else from our group, because I didn't make it to the first meeting. The boom of the steps resounding around the stairway thumped in my head like a thousand battering rams at the gates of Rome. The final steps to go.

At last we made it out of the stairway and came into a long hallway with a low ceiling. Legend has it that this is very same hallway that goes through a mysterious wormhole and leads into the old school building, on the other side of Sepänkatu. There was some kind of artwork hanging on the walls. Colourful figures carved out of wood, ovals inside each other, mysterious shapes. At least their message remained a mystery to us... I remember someone with a lightly pale face remarking "the works of designers". At the end of the hallway, we were met by some steep and dangerous-looking steps. I was not sure whether I would survive them without a stumble.

After we had made it through the hallway and up the treacherous stairs, I was greeted with a wide open, peaceful space. It was the first such space since the school's lobby. Our brave group continued its exhausting trek through this great hall. We went around an enormous pole in the middle of the room beyond which there appeared a blindingly bright, yet bewitchingly attractive soda machine. With icy coolness we passed it and once again disappeared into the maze of hallways.

We had hardly wandered for another hour after our leader gave out an enthusiastic holler: "Here it is!". He dug out a wallet from his back pocket, placed it on the door's sensor and, quite miraculously, the lock snapped open. We looked at each other in silence for a moment. The group leader placed his hand on the door handle while wiping a bead of sweat off his brow. Handle down, a soft nudge, and the door opened, hinges screaming. As the door opened, a brown-grey cloud of dust puffed out and a smell I was unfamiliar with spread into the labyrinthine hallways. It was clear that the room had not been visited in centuries. We had no idea what to expect, and everyone was prepared for the worst. What lay behind the door might be a stairway to hell, a kingdom of gold or anything in between.

The search for a flashlight was taking a painfully long time, the room was pitch black and we had no idea what lay in wait for us. Were someone or something to attack from the darkness right now, we would be in trouble. At last someone found a flashlight and handed it to the group leader who peered inside in dread. Sweat running down his brow he took a nervous look around our group and said, "Ladies first", handing the flashlight with trembling hands to the blond young lady standing next to him and chosen to be our project manager. Following the lead of the blond lady, we crept inside, rigid with fear. The strange odour that had spread out of the room kept getting stronger step by step. The entrance hall was empty, and the nervous breathing and trembling hands of our group echoed in the concrete chamber. Following the lead of our project manager, we passed underneath a massive arch, glancing around vigilantly. To our great luck, we found nothing worse than the Moomin Groke in the room, merely a pile of old junk. The tension dispersed and our group let out a sigh of relief.

My senses opened up and I began to make observations about the room. It was low-ceilinged, with the ceiling undulating just above our heads. The windows were small and curiously high above. One could see people's feet fleeting past them, meaning that we were right below street level. I took a peek outside and saw Luostarinkatu. The legend is true, then. I looked around – the room seemed to be a former classroom. Old chairs that could not withstand sitting on without breaking, old desks, books, teaching tools, chains and I think there was a teacher there, too, resting in a corner. Some of the desks bore deep scars, memories of unruly children being lashed on the fingers with a pointer. The room also contained heaps of dust. I believe the smallest wooden objects to have turned into dust as a result of changes in the atmospheric pressure caused by the opening of the door.

After we had recovered from our initial shock, we immediately began to brainstorm and think about various solutions for furnishing the room. We agreed that everyone of us would set aside a little time for brainwork during the coming week and envision the purpose for which the room would be refurbished. Nothing more to it than to get down to this business of creating a perfect classroom and wait for the project hatchery's next session.

Plans and the changes to them

Many of the following project hatchery lessons were indeed spent on planning the room. What should it be like? What would its purpose be? Who should it be for? And above all, how much money could we spend on fixing up the room?

As we had agreed, everyone had brainstormed and thought about a couple of ideas for fixing up the room. There were all sorts of ideas and it was suggested that the room would be fixed up as, among other things, a meeting facility, a recreation room and a room for studying. We nevertheless agreed that the most important thing was to make it comfortable. Given that our teacher tutor also had his own views on the matter, we ended up planning a multifunctional and easily convertible space in which one could hold meetings and study while taking it easy. Above all, the space should be comfortable and please the eye, while at the same time a fully functional meeting space with the readiness to hold a session of any size at all, if need be.

So, now that the objective was clear, how should we go about the implementation? How to shape a small space into an all-round super room, dazzling in its ingenuity. Not an easy task – challenge accepted! We began to browse through the pages of various furniture shops, frantically searching for possible furniture and thinking about the placement of that furniture. We also called the City of Turku to ask what we could with the room and what not. The instructions provided by the city proved to be stricter than the constitution of North Korea. Nothing whatsoever could be attached to or hung on the walls. No painting, nothing may be detached and no carpets may be laid, so as not to upset the cleaner. The curtains may not touch the radiators. The only positive aspect was that the installation of laminate flooring was allowed, albeit with thousands of conditions, of which I will not go into more detail here.

After several hours of browsing the internet looking for special offers and after thousands of phone calls and a tour around Ikea that took hours, our vision was starting to take shape. The first finished plan on the room was lovely. Exuberant sofa modules, a barrel table, a bar top and stools, laminate flooring and a set of separate decorating elements each more fantastic than the other. And think, for a mere €3,000!

Money troubles...

After we had drafted this glorious plan, we rapidly hit a wall. The problem was money, or rather the lack of it, as in the daily lives of many a hatchery member. We were waiting for the renovation budget provided by the school like nothing else, until at last, after several weeks of nervous waiting, our teacher tutor finally opened a crack in the screen that was blocking the light at the end of our tunnel. Apparently some big shot was coming around to listen to the fruits of our brainwork. On the morning of said visit, we could hardly keep in the collective pants of our hatchery. Today was the day that we would hear about the generous funds that would be put at our disposal.

As Mr Big Shot arrived, we were bursting with excitement. We had prepared a stunning PowerPoint show of our plan and even managed to pick out its presenters after a confrontation marked by plenty of blood and gore. We were slightly disappointed when, after having lovingly prepared and tenderly presented our plan, it became apparent that Mr Big Shot's shoes were not, after all, big enough for him to be calling the shots. Our money-spinner, though undoubtedly apt at politics, was blissfully ignorant about everything having to with our budget. What we did discover, however, is that to him our €3,000 budget sounded enormous. To work, then.

We started the pruning with a heavy hand and, for the first time, also took into account our teacher tutor's views in terms of the decoration. The oasis of tranquility to be created in the middle of our bleak school building seemed to have become nothing but a distant dream. The designing of new cheaper furniture was challenging, but first and foremost nerve-wrackingly frustrating, given that we did not have an inkling of the budget to be given to us by the money men sitting on the coffer.

While the €3,000 budget was too much, we had not been told what would be a suitable sum. According to wildly circulating rumours, the previous hatchery that had been decorating a room had been provided with the princely sum of a hundred euros in the way of funding. This led us to draw the conclusion that our budget could be anything between a hundred and three thousand euros.

In her nearly boundless creativity, however, our project secretary turned out to be our project's saviour, spinning up, as if out of thin air, one incredibly wonderful, low-budget plan after another. In a matter of moments, our project had hit the ground hard, only to uplifted again, in better shape than ever. The new plan was approved straight away, and we were finally able to get down to more concrete work, of which particularly the construction crew of our mini-community was more than pleased.

From a ghetto crib to a living room

Suddenly, our mentally grating but physically relaxed project turned over on its head. People started disappearing from our Friday meetings to pick up truckloads of equipment from mysterious locations. Given that it may be wise to give less attention to these treasure troves (black markets), why don't we skip to the morning on which, to our surprise, we found a floor in our room. I mean a real floor. A living room floor. During the wee hours of the morning, our construction guys had installed a wonderful laminate flooring bursting with warmth on top of the old, asbestos-ridden floor reminiscent of the floor of prison cell. We began photographing the floor at once, and the installation had indeed been recorded during the night for the purposes of the presentation.

Finally, our construction crew that had offered up its blood, sweat and tears and stayed up for countless of hours, was finished with its job. When I went to take a look at the room in the morning, this tired and haggard-looking bunch wandered across my path like a pack of zombies, a clear sign that it was time to let then get some rest. Once the room's floor had been fixed, it was time for another crusade to Ikea, to collect the carefully selected furniture. We called our teacher tutor to inform him of our upcoming trip to Ikea and to ask him where the bill could be sent to. It soon became apparent that our teacher tutor actually demanded to join us in person, to stand guard over the school's scanty nuggets of gold. With him being a busy man, we decided to look at the furniture next week.

Same time, back in the poster group…

One should not forget that, at the same time as the freeloading decoration team was wondering about and doing all sorts of tricks with the interiors, the poster group was engaged in demanding brainwork, their little grey cells almost at boiling point. This resulted in an amazing poster, next to which any other poster would like the scribblings of a four-year-old chimpanzee. Despite the hard work, our poster was not successful in the poster competition, even if we ourselves thought it was stunning in its ingenuity. Blinded by the magnitude of our own greatness, we had underestimated our competitors.

While we were waiting

While we were waiting for our trip to Ikea, it was high time to start compiling the hatchery's presentation video. The question "Has anyone got any ideas?" was followed by a long and painful silence. I can almost swear to hearing each hatchery members' brains booming in their emptiness of ideas. But hot diggety, this is an innovation academy, we'll think of something! And then it hit us, like a bolt of lightning. A little redecoration or, rather, a little classroom redecoration!

After watching a few examples on YouTube, we started planning our own decoration show. A little arm twisting also provided us with enthusiastic actors for the show. Lights, camera, action! The cameras buzzed and our incredible team of actors created film industry history with a performance worthy of an Oscar, not to mention the script and directing.

At long last, we also got to Ikea to pick up the furniture and, naturally, the camera was kept rolling there as well. Finally, we faced the Friday morning on which we could hold our project hatchery in the space decorated by ourselves. The project was practically finished. The only things remaining were the editing of the video, the presentation and the final report. Editing was taken over by our trusted and beloved secretary/IT wizard. Tens of hours of editing later our hilarious decorating show was finished. When the presentation day finally arrived, it was time to show our video. To the disappointment of us all, however, our video did not work in the Monitori auditorium. I remember someone from the audience commenting, in a melancholy tone, "Oh s***".

We're in trouble, the video doesn't work. I was sitting safely among the audience, watching as panic crept on the faces of my friends standing before the entire audience. It was time to do something. The rest of us joined our suffering friends standing before the audience and started to work on the problem. Luckily enough, the distinguished director of our video took control of the situation, as is only appropriate in the case of an old corporal, and saved our team from this embarrassing slip-up. While it is true that some others tried to mumble something in between, the credit for saving the show goes to this lady.

After the show

Following the aftermath of the disappointment-filled presentation day, I was walking, hands in my pockets, towards the home away from home that we had so lovingly set up when, to my surprise, I noticed a queue formed at its door. I started to go through my pockets for my mobile phone – there must be a corpse in the room. Was it perhaps the teacher, slightly overgrown with moss, whom we had already observed during our first visit to the room?

PICTURE 5. *A space refurbished by a hatchery (hatchery 7).*

I ruthlessly elbowed my way in, in an attempt to see what kind of tragedy had entered our chapel of love. I was shocked to see the sofas full of dudes just lazing around and playing backgammon. I felt rage bubbling up inside me. What wretch has the audacity to chew gum in the temple of peace built by us? Apparently our catastrophic presentation had been a roaring success in terms of the room's marketing. Bugger. Where will I go now once I lose my apartment due to endless hatchery parties? My spot is now known to others. Besides, we were supposed to have a project hatchery meeting here starting any minute now! Quick as lightning, I grabbed the cane I had sharpened in advance and used it as a weapon to clear the stage. After I had cleaned up the blood trail, I let the rest of our hatchery members in. After I had told them about my observations, the whole gang was pale with dismay. We should have kept the room our secret after all. Oh, well, too late now. No good deed goes unpunished.

6 FINAL CONCLUSIONS ON THE JOURNEY TOWARDS PROJECT HATCHERIES

These days, there is a fair degree of agreement on providing students in vocational training with skills that allow them to be able and willing to learn new things in their work while being capable of solving various problems in a creative way alone and together. Problems that often characterise Finnish working life – the lack of cooperation skills, inflexibility and the insignificance or lack of constructive criticism – may also reduce through the use of new learning methods (Lonka & Paganus 2004, 251). The basic idea of innovation pedagogy is for graduates to learn and become adept at working methods that create new operations and renew old ones as early as during their student years. The project hatchery represents one method of innovation pedagogy. In project hatcheries, students work on various projects in multidisciplinary hatcheries. This report has discussed project hatcheries, their activities and the learning that occurs in them on the basis of hatchery reports written by students.

It is interesting to observe that the requirements various parties set for hatchery work, as a teaching method, seem to be higher than the requirements set for traditional classroom learning. In many ways, project hatchery work is indeed evaluated much more specifically than average courses. Drake (2010, 97) has also noted that project learning must be separately justified and proved in educational communities. In hatchery work, the shared meetings between various tutors and the development of the operating concept in cooperation with the students also differs from the majority of courses.

According to the hatchery reports, students' attitudes towards hatchery work varied, but towards the end of the hatchery course, the majority of hatcheries already felt that they had learned many things they do not learn during conventional courses. The hatcheries performed well in their projects and

were clearly proud of their achievements. They also learned how to tolerate uncertainty and even failure. Failure often proves to be the experience from which students learn the most. While first projects do not always necessarily lead to great epiphanies, they do provide students with a solid basis for research and development activities as well as working life. As Drake (2010, 96) points out, some projects or parts thereof also tend to fail, despite good planning.

What seems to hold particular significance for students is the group activity and one's own group. It was somewhat surprising to realise the importance and, especially at the beginning, even fear students attached to the three-credit hatchery work and the project. Tutors should indeed keep this factor in mind, since projects, as a way of working, may be very familiar to the tutors themselves.

Teacher and student tutors play an important role in the success of hatchery activities. Based on the hatchery reports, it seems that different tutors' success in the tutoring varies to a slight degree. For some tutors, this way of working may be new in the sense that the tutor's role is to be the instructor of the learning process, in particular, rather than the content. At its best, hatchery work also forms into a learning process for both the teacher and student tutors. The reports made little comment on the activities of student tutors, the reason for this probably being that the students were aware of the separate evaluation pertaining to the student tutors.

It is clear that there is still a need to put some effort into the development of tutoring, so as to develop hatchery activities. Work methods such as these should involve continuous evaluation, in which the various operators receive feedback on the basis of which remedial measures can be taken. A reflection of one's own activities is important. Although the students had already completed a personal mid-term report on their learning and the activities of their respective hatcheries, the hatchery reports made no mention of whether discussions had been held or any measures taken on the basis of these reports. Sometimes it is also assumed that all students already master group work, which is why tutors overlook the provision of sufficient instruction for such work.

A good and encouraging atmosphere has great importance for the tutoring. It is clear that the hatcheries with their different students and personalities have also been very different, due to which the requirements for tutoring have also varied. Each teacher tutor has had three hatcheries to tutor and, according to

the hatchery reports, the students' experiences may have been very different in different hatcheries. The project manager's role in hatcheries has also been significant. The range of topics has been diverse. The reports leave one with the picture that a topic which at first seemed boring or unfamiliar seemed to become okay as the hatchery work progressed.

New educational solutions also pose challenges to those who study learning. The pace of change in working life nevertheless often demands solutions from training and educational organisations before the researchers of learning have time to produce them. (Kauppi 2004, 208.) Teachers have a significant position in the development of education. There is reason to respect their expertise and the know-how brought on by expertise. Teachers should boldly try and gradually develop new ways of learning. For teachers to be able to cope with their work and retain the meaningfulness of it, they also need to surpass themselves every now and then and learn and try new things. Some of the changes relate to the teacher's new kind of role as an instructor of learning in a rapidly developing world. (Hakkarainen 2005, 15.)

It has been suggested that many professions will, in the future, disappear or become indistinct, given the high degree with which professional competencies are changing. The changing professions and the increasing number of people who change their profession or occupation also make it more difficult for professional identities to be born and grow stronger. In the future, professional identities may not be built around a certain profession or work so much as competence. This sets its own challenges for vocational training and education. (Stenström 1993, 35–42.) Higher education is tasked with providing students with tools that allow them to build up the competence needed in working life and to shape their professional identity to be increasingly flexible.

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APPENDIX

INSTRUCTIONS FOR THE FINAL ESSAY

This year, we are replacing the hatchery report with an essay. It is therefore advisable for each hatchery to maintain a journal/take notes and/or photographs, etc., on the hatchery's activities and the project's progress throughout the autumn. When the hatchery nears its end, the members will use the aforementioned material to write an essay/account/narrative about their project (any possible illustrations or photos included). This kind of final assignment will allow hatchery members to freely use their innovation skills. It also helps to avoid situations where too precise rules restrain creativity.

Should the beginning nonetheless prove difficult, students are provided with the following tips:

OUR PROJECT, i.e. come up with an interesting name!
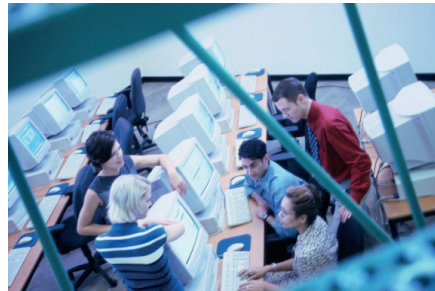
What was done?

What was a success?

What may have gone awry?

Possible blunders

Comments from hatchery members

What was learned?

etc.

The best/most interesting essays will be printed in a publication of Turku University of Applied Sciences. After a preliminary round of eliminations, four evaluators will select the best three essays out of the ten most interesting ones. The authors of these three essays will be awarded early next year.

Although the essay will be evaluated as part of the hatchery performance, authors need not sugarcoat issues or "improve" upon the project's success. The essays should not mention anyone by name or, naturally, hurt anyone's feelings. In other words, the idea is to get well written essays and accounts!

Students frequently ask the question: "How long should it be?". The answer to this is: "Three to six pages".

The essay should be returned to one's own student tutor by 11 December. The student tutor will forward the texts to the address marjo.kumpula@turkuamk.fi