WHERE SHOULD I BEGIN?

HOW COULD I DEVELOP?

Compiled by **Lenita Hietanen and Essi Kesälahti**

Handbook for training work life and entrepreneurship skills in comprehensive and general upper secondary schools

Based on the interpretations and experiments of Finnish class teachers, foreign language teachers and guidance counsellors

Leverage from the EU 2007–2013

Centre for Economic Development, Transport and the Environment

European Union
European Social Fund

Where should I begin? How could I develop?

A handbook for teachers in general education to implement work life and entrepreneurship in their daily practices.

Based on the interpretations and experiments of Finnish class teachers, foreign language teachers and guidance counsellors

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Proof reading: Scribendi Inc.

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ISBN: 978-952-484-828-2

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Rovaniemi 2015

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1 Introduction

It is generally acknowledged that work life should be taken into account at the lower levels of general education. The jobs in the public sector are increasingly diminishing, so it is likely that in the future more people will make their living as entrepreneurs, especially small-sized entrepreneurs. Therefore, entrepreneurship education and practicing work life skills in schools is significant from the point of view of developing education and society as a whole. Entrepreneurship education aims to develop and improve individuals' entrepreneurial capabilities (Finnish National Board of Education [FNBE] 2009,) and it is recommended to be implemented at all levels of education, in both general and vocational education (European Commission 2008, 2013: Ministry of Education [MoE] 2009).

Entrepreneurship education is recommended in the Finnish National Core Curriculum for Basic Education (NCC) since 1994. The current NCC for basic education

takes work life into consideration when defining the mission of basic education: '…*so that the pupils can obtain the knowledge and skills they need in life, become capable of further study, and, as involved citizens, develop a democratic society*' (FNBE 2004, 12). The main guidance for addressing entrepreneurship education is defined in the cross-curricular theme 'Participatory citizenship and entrepreneurship' (FNBE 2004). The renewed NCC (2014) emphasises transversal (generic) competences and work across school subjects. ´Work life and entrepreneurship´ is one of these seven transversal (generic) competences the NCC for basic education recommends to be taught. The aim is to build learners' transversal (generic) competence while taking into account the subject-specific goals and contents. The renewed NCC for basic education also emphasises communality as a central aspect of school culture. In addition, the recommended multidisciplinary learning modules (locally designed and implemented) promote transversal (generic) competences. The reform of the National Core Curriculum for Upper Secondary School has just began; however,

work life and entrepreneurship are already widely apparent in the current curriculum (FNBE 2003).

According to the studies commissioned by the Finnish Economic Information Office (e.g. 2014), young people in Finland think they do not have sufficient work life skills after they finish general education. They further think that the lack of work life skills hinders their transfer to vocational education and competence to bring out their strengths, for example, when looking for a summer job.

The '*Where should I begin? How could I develop?* handbook provides pedagogical models and ideas for teachers in comprehensive schools and upper secondary schools to plan their learning environments from the point of view of developing learners' entrepreneurship and work life skills. The handbook is directed towards teachers who have not yet found the connection between work life, entrepreneurship and their teaching practice. In addition, the handbook aims to encourage and give new insights to those teachers who already somehow connect work life and entrepreneurship in their learning environments. The publication has been produced in

the YriTy (entrepreneurship and work life) research and development project, coordinated by the Faculty of Education, University of Lapland in Finland. The project funding has come from the European Social Fund and locally from the North Ostrobothnia Centre for Economic Development, Transport and the Environment, which comes under the administrative branch of the Ministry of Employment and the Economy.

2 Research-based teaching practices in the YriTy project (Project about entrepreneurship and work life competences as research-based parts of learning environments in general education)

The YriTy research and development project aimed to provide scientifically evaluated models, materials and expertise to help teachers in comprehensive and upper secondary schools to apply the objectives related to work life and entrepreneurship into their practice. After all, those objectives are instructed in the curricula. The participating teachers in the project have planned and carried out individual pedagogical development experiments during the year 2014. The experiments were based on their own ideas on how they need to change their learning environments to enable learners to practice their work life and entrepreneurial skills. The development cases have been communally and scientifically evaluated during the process. Summing up,

the focus of the project has been on how teachers interpret, implement and develop relations to work life and entrepreneurship in their learning environments.

First, the teachers were gathered together to discuss: they defined what the focal points in learning environment are that take work life and entrepreneurship into account. They concluded that to enhance learners' work life and entrepreneurial skills, learners should be confronting others in a non-prejudicious way, be responsible for others, be individually and collaboratively self-guided and able and willing to network. In addition, they should be creative, able to support their peers, relate their individual goals to common ones and willing to act for the common benefit. This handbook represents the pedagogical solutions the teachers created to make this possible.

The experiments represented in this handbook are carried out by two class teachers in comprehensive school, two language teachers in the upper level of comprehensive schools and two guidance counsellors in upper secondary schools. Some of the teachers have carried out an experiment only during the spring and some only during the autumn of 2014. It is also worth mentioning that the experiments took place in a

non-business context, in everyday school practice. Most of the experiments focus on learning activities that have a resemblance between activities needed in work life and entrepreneurship, while in other experiments the elements of work life and entrepreneurship are emphasized in learning content as well. In any event, the main purpose has been to create learning environments where learners can construct a basis for their understanding about work life and entrepreneurship. After all, business and economic life and the functioning of society are topics that they will face in the future, for example, in applicable subjects, themes, projects and in visits to workplaces and enterprises.

The teachers have been observing and evaluating their development processes. An entrepreneurship education researcher (project manager) has been facilitating them. The teachers carried out self-evaluation through writing and there has been some communal evaluative discussion as well. The teachers constructed a mutual understanding about work life and entrepreneurship at the beginning of the project. Based on the mutually constructed understanding and the experiments, they established a

model that helps teachers to create learning environments that take work life and entrepreneurship into account. The model they created consists of a list of 10 questions (see Chapter 7). By asking the questions themselves, teachers can ensure their learning environment settings and pedagogics foster learners' work-related and entrepreneurial thinking processes and actions.

The project has also aimed to support teachers in developing and examining their work in their workplaces, especially now, when the curricula updates are topical in Finland. For this reason we decided to include in this handbook teachers' notices about their own entrepreneurial activities during the development experiments (see Chapter 6). Added to this, they also offer ideas for self-reflection (see Chapter 8). One could say the teachers have carried out practices of continuing professional development (in their workplaces) through participating in this project where they produced pedagogical experiments in their schools facilitated by the entrepreneurship education researcher. This resembles both guided learning in the workplace (Billet 2002) and work-integrated learning (Jackson 2006).

Different phases of the project have been evaluated in international scientific conferences, and one of the conference papers is enclosed in this handbook (see Chapter 10). The paper focuses on examining how teachers' development experiments and implementations during the spring of 2014 relate to previous research on work life and entrepreneurship.

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4 Summary of the kick-off seminar and the first development cases: What are the crucial factors?

In the beginning of the project the teachers gathered together to discuss their views and experiences on work life and entrepreneurship. The teachers pondered first in small groups what work life and entrepreneurship means and what it should mean in the framework of general education. There were two guidance counsellors from upper secondary schools, three primary school teachers, two language teachers from upper comprehensive schools and a class teacher/home economics teacher involved in the discussions. In addition, a school coach from the Finnish Economic Information Office took part. The project manager facilitated the discussions, keeping in mind the goals of the project.

The conclusion of the discussion was that learners' autonomy is the starting point for practicing working life skills in general education. On the other hand, it was addition-

ally discussed that learners belong to communities, such as the classroom community. Thus, teachers pondered how learners' active participation in the community can be enabled. They also defined what features in learning environments and teachers' practices either enable or hinder learners' work life and entrepreneurship-related activities. The conclusions of the discussions are summarized as follows:

Learners' autonomy should be built on their

- ✓ Own ideas
- ✓ Previous experiences
- ✓ Initiative
- ✓ Own strengths
- ✓ Self-responsibility
- ✓ Having influence
- ✓ Setting their own goals
- ✓ Self-guided knowledge searching, e.g. by exploiting information technology
- ✓ Creativity
- ✓ Encouragement to performing

In their communities, learners should be

- ✓ Confronting others in a non-prejudicious way
- ✓ Responsible for others
- ✓ Influential
- ✓ Interactive
- ✓ Individually and collaboratively self-guided, e.g. in searching for knowledge
- ✓ Supported by peer learners
- ✓ Able and willing to network
- ✓ Able to relate their individual goals to common ones
- ✓ Willing to act for the common benefit (i.e. intrapreneurial activity)
- ✓ Creative

The teacher facilitates learners' work life and entrepreneurship orientation if the teacher

- ✓ Confronts each learner as valuable
- ✓ Listens and notices learners' ideas, experiences and knowledge
- ✓ Connects learning situations with learners' life through both ideas and benefits
- ✓ Organizes space in learning situations for learners' parents, grandparents or other relatives as experts
- ✓ Expands learning environments to nearby informal environments
- ✓ Exploits internal and external visits
- ✓ Plans and enacts learning together with learners: everyone may learn
- ✓ Plans appropriate learners' days harmoniously and collaboratively with colleagues
- ✓ Promotes themes and phenomena as content instead of little details

The teacher hinders learners' work life and entrepreneurship orientation if the teacher

- ✓ Decides independently about the contents, methods, materials and vehicles concerning their lessons
- ✓ Plans strictly detailed lessons
- ✓ Plans lessons according to ready-made materials and guides
- ✓ Fears risks and avoids them

After developing a mutual understanding through discussions, the teachers planned and carried out their first development experiments in which they tried to enable learners' work life and entrepreneurship activities. The project manager facilitated the planning process by providing the teachers with 12 concepts that characterise especially small-size enterprisers' behaviour, which she has used in her previous studies. The concepts were problem-solving skills, creativity/innovativeness, the ability to adapt to changes, learning from mistakes, tolerating uncertainty, risk taking, commitment, perseverance, initiative, self-confidence, responsibility and the ability to cooperate (Hietanen 2012, 2014). After the experiments were carried out, teachers evaluated what kind of work life and entrepreneurship-related activities they had observed in their learners, when studying, for example, mathematics, English and Swedish. The following table sums up teachers' observations:

Learners' work-related and entrepreneurial activities in learning environments during the experiment periods:

- ✓ Collaboration
- ✓ Individual and communal participation in planning and goal setting
- ✓ Individual and communal participation in studying/action, reflection and evaluation
- ✓ Recognizing and exploiting opportunities in nearby surroundings, including e-learning environments
- ✓ Recognizing, evaluating and grasping opportunities
- ✓ Developing and creating opportunities
- ✓ Creativity, Inventiveness, Innovativeness
- ✓ Making decisions
- ✓ Responsibility for learner's own choices/decision and for others "good"
- ✓ Training to tolerate uncertainty
- ✓ Learning through mistakes
- ✓ Finalizing tasks in time
- ✓ Managing/Leading learner's own studying, activity and life
- ✓ Valuing each participate as equal and as expert
- ✓ Connecting learning methods and contents into the real world (life, work, firms) by visits and reflection

Teachers' definitions and observations about the activities that relate to work life and entrepreneurship are examined in the light of previous research in the conference paper at the end of this handbook.

5 Teachers' pedagogical development experiments

5.1 Learning skills to think and learn playfully with the help of a train made of paper in math class (1st grade)

In the academic year 2014–2015 Anita Haataja had been teaching 1st graders at the Teacher Training School of The University of Lapland in Rovaniemi, Finland and her pedagogical experiment in math classes took place in autumn of 2014. The class consisted of 20 children who were split in two groups and they had these math lessons twice a week. Each group had three lessons during the experiment. The teaching topic was addition, subtraction and geometry through problem solving in pairs.

How did I practice before?

Giving learners opportunities to make choices and express their own opinions to others has been the basis of my teaching for years. I think it is important to give learners a chance to have a say in their learning. I have also allowed them to produce learning materials and by discussing with them about learning, I have given them a chance to participate in planning the learning process. Learners have practiced decision making, which includes taking psychological and social risks. They have additionally practiced tolerating uncertainty, learning from mistakes, creative problem solving, self-confidence and relying on peers in solving problems. These are crucial things in work life and entrepreneurship as well. Also the ability to express one's opinion is a prerequisite for discussions and negotiations in both everyday school life and work life and entrepreneurship. Creating one's own learning materials and participating in the learning process necessitates creative thinking and activity. School work, work life and entrepreneurship can be described as processes in which planning, activity, realization and results are reflected and evaluated. This way new information is

gained from the experiences. It appears that for a while now, my learning environment has enabled learners to practice skills needed in work life and entrepreneurship. However, I think there is room to emphasise these approaches more in my teaching. I am especially eager to try them out in teaching mathematics.

Previously, I did not encourage learners to make their own learning process visible when learning problem solving in pairs. Instead, we mainly discussed it. Then I clearly moved ahead according to the teaching content, that is, mathematics.

What did I decide to change?

I have been developing my teaching for a long time before this experiment. For years I have organised my teaching to enhance learners to become more responsible. This system of teaching relates to learners' welfare and learning to read, which I describe in my doctoral thesis (Haataja 2014). However, this pedagogical experiment delivered in the handbook started when I first tested my ideas on 2nd graders in the spring of 2014 before making the actual experiment for 1st graders in autumn of 2014. When

I was testing, I wanted to encourage learners to independently determine what mathematical skills they still needed to work on. I let the learners choose which tasks to do, and they had many kinds of materials they could use to solve mathematical problems. I instructed them to write down notes during the learning process. However, I noticed it was extremely difficult for the learners to write down the process. I further noticed that their process started when they had a chance to tell their observations to their peers.

I realized I needed a concrete model for learners as a tool to help them to make their learning process visible. The model could serve as a visible, natural and playful aid. Then, the idea of a train with carriages came to me, and I decided to try it out in following autumn with 1st graders.

Description of the experiment

The objective for my pedagogical experiment was to facilitate learners to connect their individual and collaborative work together in the planning phase while learning subtraction and geometry. The learners practiced process work with the help of a train model. The train was made of paper carriages: four pieces of paper were cut in the form of a carriage. The learners 'move' from carriage to carriage during the learning process. The first carriage is the 'instruction carriage' in which learners can read the instructions for the learning task. The second carriage is the 'planning carriage' in which the learners discuss and decide in pairs how they will solve the mathematical problem. In the 'action carriage' learners actually do the task. After finishing the task, learners write down in the 'what did I learn?' carriage what they have learnt. The learners worked in pairs and if they faced any problems, they discussed them together. Each pair had a laptop computer in which they recorded their discussions. The focus was on practicing to negotiate about the tasks with pairs and write down activities in the paper carriages.

At first I thought I would make the carriages and instructions by myself. I figured I would use only one train with the whole class. However, I soon noticed that it is better to let learners make their own trains that they can keep safe in their own booklet pockets.

What was successful?

The learners enjoyed making the carriages. Initially, I thought I should instruct them to colour each carriage a certain colour, but I noticed they were keen on choosing their own colours. We had practiced all autumn working in pairs and had a focus on school well-being. By December the learners worked very well in pairs in math classes. They took responsibility and even the quiet ones participated. The train model and the chance to record the discussions motivated all kind of learners and they got a chance to practice negotiation and settling. In addition, I enabled them to set and evaluate their own goals. They also practiced taking responsibility for their own and

others' learning, 'self-bossing' and directing their work. Furthermore, they gained experiences of capability of their learning. It is obvious that the learners practiced a lot collaborative work as well, a skill that is undoubtedly needed in work life.

How would I further develop?

In the future I am going to use this train idea in guiding learners individually. I see it could help learners in starting their work and in proceeding from one task to another. I will try this out with a few learners during the spring of 2015.

5.2. Multi-disciplinary learning process through constructing a gadget/buzzer (2nd grade)

Sirkkaliisa Kokko carried out her pedagogical experiment with 2nd graders in School Kirkonkylän koulu in Ranua, Finland. The 17 learners practiced work life and entrepreneurship skills while constructing a gadget/buzzer with a small electric motor. There was one teaching assistant in the classroom as well. In fact, this gadget project is a multidisciplinary learning module that the reformed NCC for basic education (2014) in Finland recommends, since the construction process of the gadget puts together many teaching subjects. The learners concluded together with the teacher that it includes at least handicraft, drawing, mathematics, environment and nature studies and mother language. The gadget project succeeded in reaching some objectives set for these subjects in the curricula. The teacher facilitated learners to participate in the planning process and setting their own goals. This was done by asking learners some guiding questions.

How did I practice before?

I have carried out this gadget project before the way that 5th graders have been helping younger learners. Unfortunately, I have noticed that the 5th graders usually take too much responsibility for the constructing project and the younger ones are not able to do as much as they could. In the second place, I have brought the supplies (e.g. a plastic sheet, a battery case, a battery, an electric motor, eyes…) to the classroom in the beginning of the lesson, just when the constructing process begins. The learners have collected supplies for their post and started to construct the gadget according to my written instructions.

What did I decide to change?

I decided to give the younger learners a chance to participate in the whole project so they could practice taking responsibility. In addition, I decided to bring the supplies to the classroom a few days earlier so they could become familiarized with them according to their own interests. I hoped that they would raise their motivation this

way. Additionally, I decided to let the learners try to solve problems by themselves, in collaboration, when they faced problems during the constructing process. At some point I figured that they could also write a story about the ‘life’ of the gadget.

Description of the experiment

All learners showed an interest in the supplies in the classroom. During the days the supplies were visible in the classroom, learners asked me all kind of questions. Those questions revealed what learners already knew and what would be new information for them. Little by little I made a plan regarding how the project could best be carried out.

We pondered together with the learners what we should do. I had noticed that learners give value to the purchased supplies, so I decided we could add a merchant play to the gadget project. I reminded the learners about the play money we already had in the class, and they became inspired to price the supplies. Learners decided on the appropriate prices in collaboration, and everyone got to try selling and buying.

After the merchant play, all learners drew a sketch of the gadget they wanted to construct. The merchant play continued as new supplies were needed throughout the process. I guided learners through asking questions and I avoided giving answers to them straight away. In addition, they helped each other: when someone had completed one phase, they could help others in it. In addition to pricing the supplies, also services were priced. The idea for pricing services came up when I glued the gadgets using a hot-setting adhesive: the learners were certain that a delicate device like this must be very expensive.

Some of the learners ran out of play money before the gadget was finished. We had to figure out what to do; then one of the learners came up with the idea of a bank. Thus, the learners founded a bank in the classroom with the help of the teaching assistant. All learners got to play the role of the customer and the bank clerk.

Finally, all learners finished their gadget, even though some phases necessitated adults' assistance. We had a 'buzzing concert', and two pictures were taken of each

gadget. One of the pictures was for writing a report of the constructing process. However, I had taken pictures during the whole process so it would be easier to remember what had been done. The other picture was for the story learners had to write in the mother language lesson. In addition, I gave them some guiding questions for the story to be written: What is the gadget/buzzer able to do? What happens to it? Could it have friends? Finally, we discussed whether those stories could be true or not.

What was successful?

The learners got to plan their own gadgets and work. They learned to solve problems and ask for help. It was natural for them to give advice to each other, and they were all motivated to do their work and help others. The practicing of work life and entrepreneurship skills was easy to start by asking what they already knew about the topic and further discussing what they needed to learn and how they could learn those things. I found it very fruitful to notice that things could be done successfully in various ways.

How would I further develop?

I think it would be beneficial to give learners even more space to think about and solve problems by themselves. As a teacher, I need to gain courage to apply this kind of working method to other teaching content as well. It is important to have courage to do things in a different way. Generally, I think teaching content should be more connected to learners' real life and society. Even with the youngest learners, teaching content and examples used should be closely related to their daily practices in the real life. This way learners see that the things taught can be useful in the future. They also learn to understand life as an entirety. I think this would raise their motivation and school satisfaction as well.

5.3 Learning working life skills while rehearsing English (9th grade)

Raija Collin teaches English and Swedish in School Putaan koulu, located in Tornio, Finland. She carried out her pedagogical experiment during the spring of 2014 as 20 learners in 9th grade were preparing themselves for the national English exam. The experiment included seven lessons that were 45 minutes long. The aim was to rehearse all English studied in the comprehensive school during the last seven academic years, and the topics of the environment, nature, nature protection and 2nd conditional in English grammar were emphasised.

How did I practice before?

Typically, I have told learners exactly what to do. The lessons have followed a traditional structure: orientation to the topic in the textbook, becoming acquainted with the vocabulary, marking down new words, listening the text in the book/reading it out loud/maybe translating, exercises related to the text, vocabulary exercises, checking

out pronunciation, grammar, discussions in English about the topic and short videos. The exam dates I have decided on together with my colleagues and the studying schedule and approach have been very book-oriented.

What did I decide to change?

I aimed to discover various ways to teach and learn this content, and I wanted the learners to participate in the planning and decision-making processes. I wanted them to think about their future needs for the English language. Additionally, I aimed to emphasise collaboration and the sharing of knowledge.

Description of the experiment

For a start, I told the class that we would do an experiment in which learning English would be more connected to work life and entrepreneurship. I also informed them about my decision to ponder together the various ways to study English. I divided learners into smaller groups in which they started to discuss their future needs for

the English language in work life. They also pondered what kind of English they would need and in what kinds of jobs they would need it. After a while, the groups shared their ideas with the whole class.

Next, I represented the topics we needed to cover during the next lessons (environment, nature, nature protection and 2nd conditional). In groups the learners ideated ways to study those topics. The suggested methods included posters, games and going outside in nature. It came out they wanted to study grammar in a teacher-led, traditional way at the beginning of each lesson. We negotiated the suggestions and finally decided to make posters. The learners were divided into smaller groups, and they made a poster about any topic they wanted that relates somehow to nature, being in nature or nature protection. The groups were drawn out of a hat since one cannot choose who he/she works with in workplaces either. Each group consisted of four members and they put their desks together. As a matter of fact, the classroom looked like an open-plan office.

I was worried that learners would communicate mainly in Finnish instead of English. Then I thought of a way I could prevent this. I gave the groups the following instructions: Every one of you is an expert on the topic. You all come from different countries and none of you has English as a mother tongue. You do not speak your other group members' mother languages. None of you is Finnish. This means that English is the only language all of you know. I instructed them to begin the work by introducing themselves in a polite way with the names and countries they would make up. While designing the posters, the learners were allowed to use books and their mobile phones when searching for information.

After completing the posters, I attached each poster to its own wall in the classroom. I grouped the learners again and made sure there was one member of every 'poster group' in each new group. The new groups gathered poster after poster and the expert of the 'poster group' explained the content of their own poster and answered questions the others asked.

What was successful?

The learners were motivated in planning and making the posters. Even though learners' English skills varied significantly, they were all keen and willing to speak English in their groups. Even the learners with weaker English skills survived with the support of the group. I was surprised at how active they were. I guess the role play in which learners got to choose their background changed their attitudes towards their skills and encouraged them to participate actively.

The experiment facilitated learners to practice collaboration and to share what they had learned with each other. Those skills are important in work life as well. Other focal points for school and work life were setting rules in collaboration, obeying them and evaluating learners' own work and activities. Learners additionally practiced acting for the common benefit. In the research on entrepreneurship education, this is defined as a feature of intrapreneurship. When learners were planning their work, they practiced many activities related to entrepreneurship, such as creativity, recognizing opportunities, setting goals, negotiating, making decisions, solving problems

and commitment. In particular, when they spoke English to each other, they took psychological and social risks. Finally, the whole learning process necessitated perseverance.

How would I further develop?

Since many of the learners who participated in the experiment are already proficient in English, I wonder how this kind of pedagogical experiment should be guided in a group that includes more learners with weaker English skills. Are they competent enough to rehearse the whole English syllabus by speaking only English? I also wondered how I could transfer this idea to practicing English writing. I think that process writing in particular is an important skill needed in future work life. Perhaps my next pedagogical experiment is going to focus on guiding learners to practice, individually or in collaboration, the parts where they make the most mistakes when writing in English.

5.4 Learning entrepreneurial activities while learning Swedish (9th grade)

Paula Koskela carried out her pedagogical experiment during the spring of 2014 when she was teaching Swedish to 9th graders in School Putaan koulu in Tornio, Finland. There were 16 learners studying Swedish in two 45-minute lessons per week. Overall, the experiment took 10 lessons and the aim was to rehearse for the national Swedish exam after three years of Swedish studies.

How did I practice before?

Typically, learners have rehearsed with my ready-made materials that consist of crossword puzzles, grammar exercises, games and so on. I have also used online exercises. The aim has been in preparing learners for the national exam and for further studies.

What did I decide to change?

I decided that learners should think about their future studies and language needs and they should be the ones who define what focal things they need to rehearse. I wanted to try this to see how it works. I also wanted learners to list what teaching methods they prefer and find most efficient. I hoped this would raise their motivation and activity level.

Description of the experiment

First, I decided we would work on the topics the learners had requested. I instructed them to write down their thoughts about their needs for the Swedish language, their motivation to learn Swedish and what they think are the most important themes. First they wrote down their ideas individually. Then they carried on pondering in small groups. The themes and methods they suggested were mainly familiar, but there were also some fresh ideas.

I picked up the themes that were suggested in each group. Then the learners started working on the vocabularies. First, in order to remind them of Swedish words, the learners played some games as they wished. Then they started preparing learning materials for others in small groups. There were four themes for groups to pick up, and the task was to prepare learning material for others' use in rehearsing the vocabulary of the chosen theme. The prepared learning materials were mainly games and picture-dictionaries. After the materials were finished, learners were divided into new groups to practice with them. I made sure each new group had a group member who had prepared the learning material so they could give instructions on how to use it.

Next we rehearsed food vocabulary through games, grouping and watching an educational video about patronizing in a restaurant. In addition, restaurant conversations were practiced in pairs. Next, the learners chose a food theme and searched vocabulary in the computer classroom. The learners prepared crossword puzzles with the help of online exercises so everyone could rehearse the vocabulary for different

themes. The learners live near the Swedish border, so we decided visit a department store in Sweden in order to practice vocabulary related to living. The learners had hoped to practice vocabulary needed in restaurants as well, so we paid a visit to a Swedish café where learners ordered in Swedish. Back in school we continued practicing vocabulary related to living: the learners had made word lists in groups in the department house and now they had to write down conversations based on other group's word lists. The national exam became close, and during the last lesson the learners wanted to rehearse the Swedish grammar with the help of my handouts. Of course, I let them.

What was successful?

I guess because I gave the learners an opportunity to think about their own learning styles, learning experiences, hopes and challenges they got more motivated and open towards the methods and exercises I suggested later. They were highly motivated to produce learning materials as well. Most of them were very initiative and

rehearsed the subjects they were supposed to. I had more time to observe them, so I noticed more easily if someone needed support. In addition, learners seemed to enjoy the lessons more than before. I allowed them to make decisions and take responsibility for their own learning, which caused more activity. They took responsibility for others' learning as well, for example, in case some members of the group did not participate as much as others. However, this refers to intrapreneurship when it is defined as working for the common benefit.

Learners practiced commitment and perseverance as they planned this learning project of ten lessons. They took responsibility for rehearsing the whole Swedish subject they had been studying in comprehensive school so they would be prepared for the national exam. I must say, learners seemed a bit uncertain. However, collaborative innovativeness and problem solving together with the teacher helped them to reach their goals. The visit to Swedish department store and café pointed out to learners why languages are studied in schools, not to mention they got to see work life in

practice. They were able to observe entrepreneurship from the point of view of a service supplier, a business owner/employer and an employee.

How would I further develop?

It would be good to let learners more often think by themselves in collaboration about their learning needs for future studies and life in general. I could guide them more to search for information independently. In addition, I need to develop my skills to avoid giving them answers straight away. I think I would also improve my ability to notice differences in learners and their activities so that I can give them enough support, space and possibilities to try things out.

5.5 Applying entrepreneurial ways of acting in English classes (9th grade)

In addition to Swedish, Paula Koskela teaches English in School Putaan koulu, Tornio, Finland. She did another pedagogical experiment in autumn of 2014 with two classes of 9th graders. The classes had 19 learners each and the experiment took 12 lessons that last 45 minutes each. The teaching topic was school, learning and passive. They also practiced creative writing.

How did I practice before?

Typically, I have taught the topics in smaller parts and we have practiced together with the whole class. I have prepared the exercises and decided on the working order. In addition, the exam date has always been the same for everyone.

What did I decide to change?

I wanted the learners to take more responsibility for their own learning and participate in planning as well. I also guided them to search for information by themselves. So, I aimed to foster their active participation and raise their motivation to learn.

Description of the experiment

We started planning together; however, I set the framework for the schedule and delivered the common goals. Those were also written in handouts so learners could save them in their materials. I decided that instead of having the same exam for everyone in the end, learners had smaller exams during those 12 lessons the experiment lasted. They were allowed to decide on the order and the dates for their own exams during the experiment. We discussed the pros and cons in this kind of a working method that gives them freedom.

Each learner decided independently how to study, where to search for information, with whom to work and when to do the exams. I observed them especially in the beginning of the lessons so I could see how each learner began working. I tried to encourage and guide especially those learners who had trouble starting. I avoided telling learners ready-made answers; instead I asked them to express what they wanted to work on and how. Some of the learners were quite confused about the freedom because they were not used to it in schools. Most of my time as a teacher went into organising the exams. When I was not dealing with the exams, I helped the learners in case they needed support.

What was successful?

The learners noticed that in order to learn successfully, they must consider with whom they work. They learned to take more responsibility for their own learning since I was not telling them what to do within a strict schedule. They began to set their own schedules, for example, when they planned their exam dates. I had more time to give

support to individual learners. In addition, the learning results were better during the experiment period than they had been before in this course. The learners reported they were happy to proceed at their own pace, and they were glad there was no fear of falling behind. Most of them liked the freedom to schedule and choose the learning content.

The learners were able to practice work life and entrepreneurship skills in a safe environment because I was there to guide them. I realized that my activity as a teacher related to work life and entrepreneurship: I based my activities on how I would set goals if we were in real work life and an employee needed to reach a specific goal. In a way I was a business manager who had a clear goal (the curriculum). I realized that a teacher needs to have time to guide learners to reach their goals. The learners do not need to be ready employees; instead they can practice the best ways to work.

How would I further develop?

Since some of the learners scheduled their exams quite late, we were in a hurry in the end. As learners are not used to scheduling their own learning, I think I would use this method when teaching smaller entities. For some learners, the freedom and responsibility to plan their own work was a challenge. I would guide these learners to practice in a more persevering way. Learners preferred to use ready-made learning materials when searching for information, so I would encourage them to exploit more IT and media. In this experiment I allowed the learners take exams whenever they wanted to. However, I guess I would have more time to guide learners if I planned the exam schedules somehow. I would also add verbal exercises.

Finally, I think I should facilitate learners more often to think. When learners ask me questions, I should avoid giving them answers straight away. Instead, I should give more thought to the guiding questions that might help them to start their own thinking processes. In my opinion, learners should learn to make the most important decisions by themselves, individually or in collaboration.

5.6 Safe start to upper secondary school: Preparing students for the challenges of working life

Ari Sirviö is a guidance counsellor in Ounasvaara Upper Secondary School and Upper Secondary School for Athletes in Rovaniemi, Finland. He carried out the pedagogical experiment among 90 1st year students in autumn of 2014. The focus of the experiment was on how new students' Swedish and English studies start in the upper secondary school after they have graduated from the comprehensive school. Languages are important as, for example, it is more difficult to cope in work life with poor language skills.

In order to cope in upper secondary school, vocational studies after upper secondary school and later in work life Ari Sirviö thinks that the following things need to be balanced already when the learner is in upper secondary school: life/values, attitudes and the basis for thinking and actions, hobbies, social relations and studies.

How did I practice before?

Typically, the students have begun their studies in upper secondary school with a ready-made study plan. I have never explored their interests and abilities in advance and I have offered the exact same study plan for everyone, but have interviewed them one by one during the first few months.

The students whose language grade (in this case English or Swedish) was below average when they finished comprehensive school have usually struggled in language studies after the first study periods in upper secondary school. In Finnish upper secondary schools, students cannot decide how challenging courses are that they study in languages, as they can choose in mathematics. Since it takes two study periods before I find out who gets weak grades in languages, it takes time before we can make a plan to support these students. However, even though they get support and guidance, the struggles tend to continue if they must study two languages in the same period or if there is a period in the middle in which they do not have language studies at all. In addition, it seems that if students have difficulties in the beginning

of their language studies, they usually have problems in other subjects as well. And of course it jeopardises future language studies as well.

What did I decide to change?

I decided in the beginning of the semester to find out which students' grade in languages had been below average or who had had a significant difference between their English and Swedish grades in the basic education certificate. They would be the ones I would interview and guide first so I could design individual study plans for them in advance. I decided to put only one language course for each period in the study plans of these students.

When I guided the whole study group of 30 students, I discussed studying with them. I asked them what makes studying easy or difficult. I wanted to encourage them to believe in themselves and aimed to find individual ways to study. In addition, I aimed to emphasise their possibilities to solve their problems, individually or in collaboration with peers, special education teacher, guidance counsellors and subject teachers. I

also asked the language teachers whether they had noticed any students having difficulties in language studies. At this point they would not know who had the lowest grades.

Description of the experiment

Before the semester started, I tracked down which students had the lowest grades in Swedish and English in the basic education certificate. Then I took a look at what courses they had planned to study when they came to our upper secondary school. If they had not chosen language courses in the first period, I added at least one language course there.

The special education teacher had examined new coming students' abilities in reading and writing, and I saw these results at the end of the first study period. I met with these students at least once to guide them personally. I offered them the possibility of studying according to a plan in which they would have one language course in

each period. The idea was to study languages cleanly: there would be just one foreign language in each period, and there would be no periods without language studies. The aim of my pedagogical experiment was to help them understand how important languages are in future work life and entrepreneurship, even though they might struggle learning them. Additionally, I wanted to facilitate them in setting their own goals for learning.

What was successful?

After comprehensive school, upper secondary school is kind of a new beginning for learners. I found it very fruitful to go through the results of the writing and reading test together with students, parents and the special education teacher. Actually, for some students this was the first time they realised they had some problems, and it was quite a shock for them. Some were relieved. It was important for them to see they were not alone and they would all get the support they need. It did not matter whether their weak language grade in the first exam was due to having difficulties in

reading and writing or some other reason. The main point was that I was now able to offer them support quickly in collaboration with the language teacher and the special education teacher. The safety net was now set.

I used a method of ‘Nelivaiheinen raketti [Rocket with four phases]’ (see Sahlberg & Leppilampi 1994). I shaped the method together with the special education teacher so it would respond to the needs of different study groups. This method and the professional skills of the special education teacher made the experiment successful. I believe the learners who have weak language grades in comprehensive school benefit from this model of having only one language course in each study period. However, the results cannot be seen instantly. So far, the students with this kind of study plan have expressed wanting to continue studying this way. In addition, I have noticed that they utilize the support of the special education teacher more than before.

This experiment confirmed how important it is to find out the English and Swedish grades in the basic education certificate, especially before learners begin their studies in upper secondary school. However, there are challenges in getting to know these grades. This necessitates a solution.

How would I further develop?

I will continue developing and strengthening the interaction between the student, parents, special education teacher and myself. Additionally, I will concentrate on helping learners to see and develop their entrepreneurial abilities, such as recognizing opportunities, self-confidence, believing in oneself, perseverance, problem-solving skills and generally their 'will to fight'.

I also think more attention should be given to group sizes in language courses. In our school the groups in compulsory language courses consist of 30 students. This large group size makes it difficult for the teacher to spot students who have difficulties during the first language courses. After all, the teacher does not know these students

in advance. In my opinion, at least the first courses should have smaller group sizes so the teacher can observe students and give support immediately if needed.

New solutions are needed, and I think the summer schools could be useful when scheduling the studies. For example, if the student takes one language course in summer school, it is possible to study just one course per period when the semester starts in autumn.

5.7 Towards one's own career and working life: Career planning in upper secondary school

Anu Turunen is a guidance counsellor in Lyseonpuiston lukio, upper secondary school in Rovaniemi, Finland. In her experiment, she wanted to concentrate on preparing students for work life and entrepreneurship. She felt that students need to be more active in the career planning/guiding process. The pedagogical experiment was planned and enacted among the process during the spring and autumn of 2014, so at this point it is not possible to do an all-inclusive evaluation of the results of the experiment. This experimental model is especially designed to aid in guiding 2nd year students in their career planning and in planning their future studies.

How did I practice before?

Typically, I have offered career guidance for big groups, and I have covered the topics in a teacher-led way. My guiding process has included one work life day when students get familiar with work life in practice. They can pay a visit to an enterprise or participate in a work life day that operates in school. The work life day in the school includes some workshops where students can practice their work life skills and become more acquainted with the forever-changing work life. I carry out a few lessons before this work life day. Those lessons have mainly included me giving information and the role of the students has been to listen quietly. They usually do not ask any questions. However, they reflect things through exercises in an online program, an aid developed for guidance counsellors in upper secondary school. This model can be used in individual guidance as well.

What did I decide to change?

I never really liked students being so passive in the guidance process. In my opinion, they should be encouraged to participate in the whole process. The exercises and the guidance should facilitate students to think and act for their own futures. Thus, the aim of my experiment was in activating students to plan their future career.

I decided to modify the exercises and questions to make students think, reflect and participate more. In addition, I changed my pedagogics and the structure of my lessons to enable active student participation. I divided the students into smaller groups right in the beginning and they worked through discussions. Instead of sharing knowledge with them, I decided they should look for opportunities to collaborate. In addition, I wanted to encourage them to set their own goals and develop their skills in creative problem solving and decision making.

Description of the experiment

The 2nd year students have been divided into two groups of 29 and 26 students in our school. I told these groups that there are two guidance lessons per week and they can decide which lesson suits them best. The members of the groups could vary every week, as working groups change in work life as well. Since the combination of the group varies, trust between learners is necessitated. The group conversations are a great way to practice trusting. After all, conversations and discussions in work life and entrepreneurship are based on trust as well.

I started by orientating the students through watching a video about difficulties in career planning. After watching it, they pondered in small groups what the factors are that need to be taken into consideration when making decisions about one's future career. They wrote down their thoughts on post-it tags, and I collected them on the blackboard so we could discuss them. At the end of the lesson everyone did an exercise that helped in finding out their strengths and development needs, and finally, they discussed them in small groups.

The next time, students met in groups of six. They had a goal of finding out their personal strengths and competences. They began by telling each other a memory of a good experience when they felt they had succeeded. Others listened and told the student describing the experience what they thought his or her competences were according to the told experience. Within the groups they further pondered in pairs what skills they had learned from their hobbies, school and free-time activities. The aim of the group meetings was to help students in finding out what would be the best place for them to visit during the work life day and also to help them choose their own career. Between the group meetings, students did some online exercises and became familiar with the recommended web-pages.

What was successful?

First of all, I feel that the experiment has just begun. For now, some students seem to be pleased with this method, while some were a bit dubious. I am certain that if I carry on like this and use this method actively and in a consistent way, students will

become more motivated than they were when I took a stricter role in guiding them and they were more passive. The good thing in small groups is that it enables each student's voice to be heard, students are more active and they all get support from their peers. At the same time, they learn skills that are needed in work life and entrepreneurship, such the ability to work in teams, communicate, to learn and solve problems.

How would I further develop?

I will try this method in guiding other students as well. In fact, I already applied it during the spring of 2015 when I was guiding the 1st year students in learning how to find a job. I still need to develop my own practices, especially when it comes to guiding groups and sharing responsibility. I must learn to trust that I do not have to be the 'talking head' in front of the classroom. I have gained a fantastic collection of

methods and material from books and training to use in guiding small groups. However, I have noticed that often it is just easier to continue working in the same way you always have instead of turning things upside down.

6 Teachers' perceptions of their own entrepreneurial behaviour in planning and carrying out the development cases

Teachers play a crucial role in implementing entrepreneurship education and in interpreting the relationship between work life and school life. For this reason the teachers in this project were given some definitions of small-sized entrepreneurs to reflect on their activities during the experiment in the light of them. This self-evaluation was done in order to strengthen their aim of developing and examining their work in their own workplaces. This is particularly essential now when the curricula both in basic and upper secondary education are being updated in Finland. For the most part, teachers were pleased with the delight and motivation learners expressed. However, some teachers were uncertain as to whether they offered enough support for learners and whether the learning content was sufficiently covered during the experiment. Here are some citations of teachers' self-evaluation:

Generally:

- Experimenting and developing always involve risk. You search for a new way to work, develop it and at the same time you learn something new.
- When you start to develop something, it is like you step on thin ice. You have to gingerly explore where the ice is thick enough to walk on. The thing is, you must take the first step. Of course you evaluate when it is safe to go and when it is possible to start the experiment full of uncertainty. In the end, this is exactly the same thing entrepreneurs do when they develop their business.

Case Gadget/buzzer:

- I took the biggest risk when I told learners we would make a gadget, even though I was not sure if I would get a teaching assistant to help me with the project. Still, I was not scared at all. Actually, I was a bit excited to take a risk.

- The time I had to stand uncertainty the most was when a learner had peeled the wire of the battery case so much it did not reach the motor. However, I fixed it by finding a new battery case.
- I felt most self-confident when learners were really keen on constructing their gadgets, guided peers and did not hurry to brakes.
- I needed perseverance when many learners needed my help at the same time. It helped if I remained calm and dropped them a hint as to whether there could be someone else who could help them. The fact that learners were keen on helping each other was reassuring to me as well.
- I expressed commitment when I encouraged the slower learners. I confirmed that there was still time to work tomorrow or as long as it takes for them to get the gadget ready.
- I learned mistakes are a part of teacher's work the day I was gluing parts to learners' gadgets and the electric engines got stuck because of too much glue.

- When I was planning the gadget project, I realised that it was not possible to evaluate how much time it would take. One of the most crucial things I understood was realising that learners can come up with better solutions than I.
- I had to be very flexible. When I saw what kind of pictures learners drew when planning their gadgets, my first though was that they weren't quite what I had in my mind.

Case Career Planning in Upper Secondary School:

'The project encouraged me to take the steps to change my practice towards the way I had been thinking for a while. As it happens, during the project I read an article I had written the time I was a physical education teacher before my career as a guidance counsellor. There was one sentence that captured my attention in the article: '*even though learners succeeded in competitions, I was most happy when I had made myself "useless" as a teacher and I could just watch learners teaching each other*'. Why could it not be like this again? Then again, when I started as a guidance

counsellor, I was responsible for guiding as many as 700 students. With that many learners the main goal is just in being able to give at least some guidance to everyone. Now we have three guidance counsellors in our school, and we all have approximately 200 students each, so it is possible to implement different kinds of methods. This just necessitates courage, standing both uncertainty and resistance to change — your own and others'. You need to be gutsy, creative and persistent and have the courage to question the status quo.

Case English and Swedish teacher:

'I needed to tolerate uncertainty in each phase of the experiment: in the beginning when I had stepped into something unknown and new and on the way, I was not instantly sure things would work out. Creativity during the lessons was needed more than ever before, because unforeseeable things happened more often. Learning from mistakes was crucial, and reflection played a big role in it. You simply must

learn from your mistakes as a teacher; actually it is certainly a skill needed in any profession. Without learning from your mistakes, you do not develop. I think I have always had perseverance; however, the experiment helped me to promote perseverance in learners more than before since now I had more time to guide them individually. I really had to listen to their thoughts. Presumably, this increased my skills to collaborate as well.

7 Guiding questions for teachers planning learning environments that take work life and entrepreneurship into account

Where should I begin? How could I develop?

1) Do I want to see and meet each learner in her/his own life?
2) Do I want to hear and listen to each learner?
3) Do I give space for the experiences of each learner?
4) Am I able to contain myself to let the silence speak?
5) Do I have the courage to 'let things be' – to plan but leave some room for changes and learners' ideas?
6) Do I express the framework for activities/studies clearly enough?
7) Do I create a safe environment to learn?
8) Do I encourage and rely on peer learning?
9) Do I give learners enough time to reflect on the learning process?
10) Do I allow myself to make mistakes and learn as well?

8 Tools for reflection and notions about the role of colleagues

Teachers' days are usually hectic, and this makes timely reflection challenging. In addition, it is not easy to learn to write down notes during the day. People tend to think they will remember things without writing them down somehow. Lack of time is a challenge, but here are some of the ideas the teachers in the project have for enabling reflection. They also point out the role of colleagues.

Ideas for reflection:

- ✓ Taking pictures
- ✓ Recordings
- ✓ Writing down short notes. This is best to do using IT since it makes it easier to work on
- ✓ It would be great if there was time to write notes about the challenges, successful points, learners' questions and things like that in the beginning and at the end of the lesson
- ✓ It would be important to organise time for discussing with learners their experiences and write notes on the discussions
- ✓ 'I think the 30-minute drive to work and back is the best time to reflect. Then, things are fresh in my mind — at least the ones I find most rewarding and challenging. It is good time to think about what I could have done differently or what would be good to do again the same way. However, I noticed that during the experiments I had to write things down right after the lessons, otherwise I would have forgotten them. This was possible during the first experiment since I had some free time before the next lesson'. (English and Swedish language teacher)

Role of the colleagues:

- ✓ ‘In my opinion, colleagues are the icing on the cake when it comes to reflection and developing your own work. They often see things from a distance and point out things I am not able to see. I think it is very important to “make colleagues internalized” and receive critical feedback from them’.
- ✓ ‘When I develop my work I want my colleagues at least to be aware of it. However, it is even better if we plan and develop together. Collaboration enriches work and collaboratively done things are priceless’.
- ✓ ‘Colleagues play a significant role. If something that I am doing does not work, it is easy to ask your colleagues how they do it. Often we puzzle the schedules together. You can also test your ideas with them; it is always better to receive feedback than just try out things on your own’.
- ✓ ‘I would be very glad if I had the opportunity to observe others teaching. That would give me so many new ideas for my own work. On the contrary, I would like my colleagues to visit my classes too so I could get some feedback on my work’.
- ✓ The case ‘Safe start to upper secondary school’: ‘The collaboration with the special education teacher was invaluable. I also found the method of the “Rocket of four phases” beneficial: it facilitated learners to think and showed them their skills in a new light.’

- ✓ Obstacle for collaboration between colleagues: ‘To be able to support learners at the right time, it is extremely important to get information about learners’ studies from colleagues and the special education teacher in comprehensive school when learners transfer to upper secondary school. However, there are some ethical aspects and legislation about privacy protection that prevent knowledge from being transferred when it comes, for example, to learners’ grades. If teachers in upper secondary school had this information, would the teaching results be better or not? I have done my work according to the law and have not discussed with teachers about students’ previous success in learning languages in comprehensive school. This is right from the legislative point of view, but would the learner have benefitted if he/she knew about the need for support? In my opinion, colleagues in different educational institutes should be enabled to discuss and reflect on learner support. I think this would help in making the final assessment in comprehensive school more equal as well: at present, too many students’ grades in language studies become lower when they come to upper secondary school, even from very good to satisfactory.

9 References

Billett, S. (2002). Workplace pedagogic practices: co-participation and learning, *British Journal of Educational Studies*, Vol 50, No 4, pp. 457–481.

European Commission (2008). Best Procedure Project: “Entrepreneurship in higher education, especially in non-business studies”, *Final Report of the Expert Group*, Available: http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/entr_highed_en.pdf

European commission (2013). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.Entrepreneurship 2020 action plan. Reigniting the entrepreneurial spirit in Europe.* Available: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:en:PDF

Haataja, A. (2014). "Siinä pitäs pomottaa itteään...": tapaustutkimus vastuuseen kasvamisesta alkuopetusluokassa. [“It is about bossing yourself”: A case study of growing in to responsibility in

a class of elementary instruction] Academic thesis. Rovaniemi: Lapland University Press. Available in Finnish: http://www.doria.fi/bitstream/handle/10024/98930/Haataja_Anita_K_ActaE_154pdfA.pdf?sequence=2

Hietanen, L. (2012). “Tänään soitin vain kitaraa, koska innostuin.” Tapaustutkimus yrittäjämäisestä toiminnasta perusopetuksen 7. luokan musiikin oppimisympäristössä. [“Today, I played just the guitar because I became enthusiastic about it”. A case study of enterprise action among seventh-graders.] Academic dissertation: University of Lapland. Rovaniemi. Tampere: Juvenes Print. (In Finnish; abstract in English) Available online: http://www.doria.fi/bitstream/handle/10024/76736/Lenita_Hietanen.pdf?sequence=1

Hietanen, L., Uusiautti, S. & Määttä, K. (2014). ”Enhancing Entrepreneurship in Learners – an Implementation and Evaluation of Entrepreneurship Education through Music Education”, *Problems of Education in the 21st Century*, Vol. 59, pp. 34–48.

Jackson, N. (2006). Work Integrated Learning in the UK: An Overview, Working paper as background for a workshop at the World Association for Cooperative Education International Symposium Work Integrated Learning, University of Westminster, 16–18 November.

MoE (2012). Loppuraportti. Lukion opinto-ohjauksen pilottihankkeiden kehittävä arviointi. [Final Report. Development evaluation of the pilot projects of student guidance in upper secondary schools]. Ministry of Education. Available in Finnish: http://www.minedu.fi/export/sites/default/OPM/Koulutus/koulutuspolitiikka/Hankkeet/lukiokoulutus/liitteet/Opinto-ohjaus_loppuraportti_130612_Final.pdf)

MoE (2009). Guidelines for entrepreneurship education. Publications of the Ministry of Education. Available: http://minedu.fi/export/sites/default/OPM/julkaisut/2009/liitteet/opm09.pdf

FNBE (2003). National Core Curriculum for General Upper Secondary Education Intended for Young People. Available: http://www.oph.fi/download/47678_core_curricula_upper_secondary_education.pdf

FNBE (2004). National core curriculum for basic education 2004. Available: http://www.oph.fi/download/47675_POPS_net_new_2.pdf

FNBE (2014). Perusopetuksen opetussuunnitelman perusteet 2014 [National core curriculum for basic education 2014]. Available in Finnish: http://www.oph.fi/download/163777_perusopetuksen_opetussuunnitelman_perusteet_2014.pdf

Sahlberg, P. & Leppilampi, A. (1994). Yksinään vai yhteisvoimin? Yhdessä oppimisen mahdollisuuksia etsimässä. [Individually or in collaboration? Searching opportunities for learning together] Helsinki: Yliopistopaino.

TAT (2014). Kun koulu loppuu. Tutkimus nuorten tulevaisuuden suunnitelmista. [When the school ends. Study of young people's plans for the future.] T-Media. Available in Finnish: http://tat.fi/wordpress/wp-content/uploads/2014/03/Kun-koulu-loppuu-2014.pdf

10 Conference Publication: Teachers' experiences in the development of work-related and entrepreneurial learning environments

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The current article is a revised one based on the paper presented in *Entrepreneurship Education Conference* (YKTT) in *Seinäjoki*, Finland 25.9. – 26.9.2014.

Abstract

This paper presents the ways in which teachers in Finnish comprehensive schools and upper secondary schools implement a relationship to work life and entrepreneurship in learning environment settings. The ways these implementations refer to the definitions of work life and entrepreneurship in previous research are also examined.

The current study is one part of a design-based research that concentrates on the crucial success factors in implementing a relationship to work life and entrepreneurship in non-business learning environments in general education. During the course of the research project, the teachers and guidance counsellors were encouraged to define the meaning of entrepreneurship education and work life according to their own understanding, and conduct one or two pedagogical experiments facilitated by an entrepreneurship education researcher. This paper concentrates on the first experiment.

Despite the fact that entrepreneurship education is often considered purely in relation to business contexts, the data shows that it can be implemented in non-business contexts, as well. Although these teachers did not have any entrepreneurial background, their learning environments consist of activities that relate to both work life and entrepreneurship. It is characteristic of these non-business teachers in this study to emphasize each learner's right to be themselves. They also seem to consider each learner as an equal part of the community. In addition, the teachers highlight,

for example, the importance of the learners' participation and responsibilities in their own learning, cooperation, opportunity seeking and grasping, in addition to the act of connecting the learning methods and contents to real life. In this paper teachers refer to both, teachers and guidance counsellors.

Key words: entrepreneurial activities, work-related activities, learning environments, Finnish general education, teachers' understanding, development

Introduction

Over the last twenty years, entrepreneurship education has been the subject of a great deal of research, focused mostly on higher education and business studies (e.g. Rae, 2010; Pittaway & Edwards, 2012). In addition to research, a large number of guides to entrepreneurial education have been produced, as well as other material to facilitate the implementation of entrepreneurship education in various educational contexts, including descriptions of actual implementations. However, most implementations focus on entrepreneurship as business-related content, to be learned as a separate subject. Policy programmes in particular have stressed the suggestion that entrepreneurship education should be given a wide interpretation, and should include normal work life activities and everyday practices (e.g., European Commission, 2012). This paper presents a number of models from the basic education system in Finland and from general upper secondary schools. In these models, seven teachers have together identified the types of behaviour needed in work life, especially in small-sized enterprises, and they have applied some features of these types

of behaviour to the learning environments they created for lessons with non-business content. In this research, the learning environment setting refers to the whole physical, social and psychological entirety, including formal, informal and e-learning. In addition, pedagogical guidance is understood as a part of the learning environment.

The teacher's role is crucial when implementing entrepreneurship education throughout the education system (Seikkula-Leino *et al.*, 2010). Fayolle (2013) has recommended that more research should be focused on what teachers actually do when they implement entrepreneurship education. Some studies looking at entrepreneurship as everyday practice have emphasized a more personalised teaching of enterprise education (Blenker *et al.*, 2012). Despite these efforts, there is still a need to describe the practices planned and carried out in schools, so that they can be evaluated against previous entrepreneurship education research; their implications for entrepreneurial awareness in learners can then be assessed, especially at the lower level of education (see Draycott & Rae, 2011). As with many other scholars (e.g. Blenker *et al.,* 2012), Pepin (2012) prefers the concept of enterprise education when

looking at non-business lessons in primary and secondary schools. Pepin highlights action, experimentation and reflection as essential elements in enterprise education. This paper considers whether the learning environments that it examines can be defined as entrepreneurial, despite their non-business content. In addition to entrepreneurial activities, everyday practices are enhanced and considered. In the current research, they are defined as work life related activities.

The current study is one part of a design-based study, which is based on work life and entrepreneurship theories, where both the theories and examined practices are developed (see Barab, 2002). The entire research concentrates on how seven teachers in Finnish comprehensive schools and upper secondary schools are interpreting, implementing and developing relationships to work life and entrepreneurship in their learning environments. The data is collected from teachers that are involved in a project (see Acknowledgements) where they carry out one or two pedagogical experiments during the year 2014. In the entire research, the focus is on the crucial

success factors when relationships to work life and entrepreneurship are implemented in non-business learning environments in general education. The issue is considered through the interpretation, implementation and development of teachers who have non-business backgrounds, and who are facilitated by an entrepreneurship education researcher (the correspondent author). None of these teachers have had any entrepreneurship courses during their teacher studies. Additionally, they have taught and still teach only non-business content.

This paper presents the teachers' common understanding of the crucial success factors which facilitate learners' work-related and entrepreneurial activities. According to their experiences, the key factors include participation, action and the close interrelationships between informal and formal learning environments, as well as ensuring space for learners to express ideas and opinions. Taking responsibility for their own learning and choices, guiding learners to recognise, evaluate and grasp new opportunities, and further develop and create them, are highlighted. The teachers also provide emphasis on promoting creativity and learners' autonomy. In addition,

encouraging learners to make decisions and learning from mistakes are considered to be important features.

Work life and entrepreneurship in the general education curricula in Finland

In Finland, teachers have great autonomy in teaching arrangements, as long as they are in line with the national and local curricula. In the Finnish national curricula for both basic education and general upper secondary schools, entrepreneurship education is guided to some extent. Both educational levels highlight learners' abilities to participate creatively in learning processes, as well as in planning them, and in setting their own goals. In addition, self-assessment based on reflective practices, and cooperation with all members in school societies, is emphasized.

In the Finnish educational system, one of the objectives of both comprehensive school and upper secondary school is to prepare each citizen to participate actively in society. Basically, this means that education should be organised in such a way

that all learners are provided with the possibility to construct knowledge and practice activities that strengthen their abilities to, for example, earn a living. Thus, work life is considered as a basic objective in these educational levels.

In basic education, the main guidance for addressing entrepreneurship education is defined in the 'Participatory citizenship and Entrepreneurship' cross-curricular theme. In both comprehensive and upper secondary schools, cross-curricular themes are instructed to be implemented in all subjects and in the school's operational culture in appropriate ways. Common instruction in the curriculum for basic education includes, for example, the following information: "*The goals of the 'Participatory citizenship and Entrepreneurship' cross-curricular theme is to help the pupil perceive society from the viewpoints of different players, to develop the capabilities needed for civic involvement, and to create a foundation for entrepreneurial methods. The school's methods and culture of learning must support the pupils' development as independent, initiative-taking, goal conscious, cooperative, engaged citizens, and help the pupils form a realistic picture of their own possibilities for influence."* (FNBE,

2004, p. 38).The familiarizing of learners with work life related and entrepreneurial activity, and its meaning, are also mentioned. In addition, learning to participate and take responsibilities in communities and societies, and learning to form one's own opinions and make use of different types of expertise are objectives for the learners. There is also the aim of preparing learners to confront and deal with uncertainty and changes, and to act with a sense of enterprise and initiative. Further, learning to act innovatively and perseveringly in achieving a goal, and to assess personal actions and their impacts, are highlighted (FNBE, 2004).

In upper secondary schools, entrepreneurship education is described as familiarizing learners with entrepreneurship, its various forms and its importance in society. However, there are no compulsory courses that include entrepreneurship as content. Essentially, the learners' objectives consist of gaining the abilities to plan one's own future and gaining knowledge and understanding about working, economic life and entrepreneurship. The aim is to prepare learners to become flexible people for the

ever-changing world and its' challenges (FNBE, 2003, p. 26). In addition, entrepreneurship is addressed in the 'Active citizenship and entrepreneurship' cross-curricular theme, the aim of which is to educate learners to become participating, responsible and critical citizens at the local, national, European and global levels (FNBE 2003, p. 27).

Teachers play a focal role in promoting entrepreneurship education, which requires learning and reflection for the teachers. However, they are not capable of reflecting, learning and developing if they do not have sufficient understanding of entrepreneurship education and practice (Seikkula-Leino *et al.,* 2010) In Finnish schools, teachers tend to blame the curricula if they cannot find ways to encourage learners' participation in the different phases of the learning processes. However, in this case it seems that the curricula do address learners' participation and activity. Thus, any weak learner participation must be caused by something else. This paper describes the first part of a development project that has one goal in identifying the crucial factors in learning environment that enable learners' active participation.

Enabling learners' work-related activities

The importance of emphasizing learners' active participation in learning environments is widely acknowledged. The big issue in many countries is the extent of the general education implicitly preparing learners for real life, especially for work life as active participants in workplace communities. However, connecting real work life and studies has been examined mainly at the higher levels of education. Despite the different nature and purpose of schooling, some of the results and ideas could be applicable to general education, at least to some extent. In fact, there are some research studies being carried out at the lower levels of education, where the aim of the work-related learning has been on learning through, about and for work (see Dwerryhouse, 2001). Unfortunately, many of these experiments and studies have been based on organizing some kind of work life, or even enterprise context and content (e.g. Hytti & O'Gorman, 2004). These do not offer appropriate tools for teachers in general education in non-business contexts and contents. Here, we present

some of the studies and their results that focus on higher education, which have potential to apply in the general education context, as well.

For example, Baker and Henson (2010) have researched students' capabilities to employ themselves after graduation at the university level. These scholars highlight, for example, communication and teamwork abilities, flexibility, motivation and problem-solving skills as integral employability skills. However, they point out that employability skills slightly differ from the skills needed as an employee, even though there are many similarities. According to Billett (2002), the important elements in improving workplace practices are, for example, engagement, co-participation and timely guidance, including questioning and coaching. Additionally, he highlights the role of peers. Bratton (2005) emphasizes teamwork and facilitation, focusing on the development of workplace practices through fostering workers' innovativeness, decision-making and responsibilities, which may increase their autonomy and control over their work. When employees to some extent behave entrepreneurially in their organisations and take responsibility for the common good, some scholars define

them acting like intrapreneurs (Gapp and Fisher, 2007). When improving innovativeness and intrapreneurship in working places, Gapp and Fisher (2007) see the action learning approach as integral, through enhancing teamwork and social participatory practices.

When we consider a combination of learning in formal and informal environments, and even in e-learning contexts, work and social interaction, we refer to Jackson's (2006; 2010) concept of work integrated learning. Although this model has been developed and studied in higher education, the activities in the work environment may be evaluated, recognized and applied in formal learning environments in comprehensive and upper secondary schools, at least to some extent.

In addition to the scholars in work life, some researchers in entrepreneurship and entrepreneurship education have considered entrepreneurs' behaviour in relation to individuals' everyday practices, for example, as employees. Jones and Iredale (2010; 2014) have focused quite a bit on the relationship between normal daily practices, work life as an employee and entrepreneurship. They define entrepreneurial

activities as enterprising when they are not happening in a business context, or straight for dealing with business (Jones & Iredale, 2010; 2014). Like these scholars, Pepin (2012) uses the concept of enterprise education when emphasizing Dewey's experiential, action- and reflection-based approach in his entrepreneurial learning environment. Additionally, Blenker and co-workers (2012) define entrepreneurial activities without a straight connection to business as enterprising behaviour. Despite this, they see that competencies are useful in many contexts, and may help people to create a better life in general.

Enabling learners' entrepreneurial activities

As previously described, the justification for entrepreneurship education in the Finnish education system is clarified by the curricular instructions. Despite entrepreneurship education having an active research tradition in general, it is still quite an unexamined field in the context of lower levels of education, and especially from the non-

business point of view. For example, Draycott and Rae (2011) have addressed a need to increase research-based evaluation of the practices that are planned and conducted in schools. In their studies, they have highlighted practical creativity, learning by experimentation and dealing with risks, uncertainty and failure in young people's education.

Entrepreneurship has been defined in many ways and from various approaches. It is widely acknowledged that entrepreneurial activities and features should be defined in each context, since there have not been found certain universally applicable definitions (Mwasalwiba, 2010; Welter & Smallbone, 2011). As the focus on entrepreneurship and entrepreneurship research has mainly concentrated on higher education and real enterprises, it is natural to borrow the concepts from these contexts.

Gibb (2005) has done a great number of research studies on entrepreneurship education. For example, he has defined concepts that characterize small-and medium-sized entrepreneur's attributes, skills and behaviour. These concepts include, for in-

stance, innovativeness, initiative, opportunity seeking and grasping, solving problems creatively, action orientation, taking responsibility for and ownership of things, achievement orientation and networking. Rae (2007) and Suonpää (2013) highlight the role of opportunities as an essential basis for entrepreneurial learning process. Shane and Venkataraman (2000) give emphasis to the process of exploiting opportunities after recognizing them. Further, Venkataraman et al. (2012) address the creation of the exploited opportunities.

The task of enabling every learner's autonomy and right to individuality becomes a challenge when activities in learning situations are built upon the basis of certain categories: for example, on the basis of the needs of work life and entrepreneurship. Despite the importance of co-operational activities, such as peer-learning, learner's autonomy is crucial in both individual growth and in the entrepreneurial learning process (Hietanen, 2012; 2014; Van Gelderen, 2010). As the basis for learning, Kyrö and Carrier (2005) highlight learners' activities, including the act of learners setting their goals, and further, planning the needed activities to achieve those goals (see

also Gibb, 2005). Some scholars (e.g., Gibb, 2005; Jones & Iredale, 2010; Kyrö, 2008) consider each learner as an owner of, or even as a leader, in her/his own learning path. In both individual and communal entrepreneurial self-guidance, practice is an essential activity in addition to learning to take psychological and social risks (Kyrö, 2006; see also Hägg & Peltonen, 2014).

Because of the all-round educational nature in comprehensive and upper secondary schools, the importance of keeping in mind the values and tasks of general education is emphasized. When focusing on each learner's personal growth to become a free and widely educated self, teachers must have values and ethics strictly as a basis, especially when emphasizing entrepreneurial activities, which tend to be more or less business-related (Anderson & Smith, 2007; Hägg & Peltonen, 2014). Despite the general applicability of entrepreneurial activities in work life, and even in everyday practices, it is not appropriate to agree that entrepreneurial activities work as an all-embracing solution that fits every situation. Instead, these practical activities

should also be considered through critical lenses (e.g. Fayolle, 2013; Jones & Iredale, 2010).

Methodology, data and analysis

This is one part of a design-based research and development study in which seven teachers carry out one or two pedagogical experiments during one year. The entire research concentrates on how these teachers are interpreting, implementing and developing a relationship to work life and entrepreneurship in their learning environments. The design-based methodology facilitates bringing the research and practice closer to each other in formal education. Design-based research aims to have an impact and transfer the conducted research into improved practice, as is the case in this study (Anderson & Shattuck, 2012.)

In this piece of research, the teachers and guidance counsellors first began with discussions about entrepreneurial behaviour and attitudes and about the role of entrepreneurship in society. In addition, one municipal officer responsible for education who had previously worked as a teacher participated in the discussion. Additionally, one educational coach from the Economic Information Office and the entrepreneurship education researcher (supervisor of the project, correspondent author) participated in the discussion. Second, they worked together to define the learning processes pupils should go through to be prepared for work life, with a special focus on small-sized enterprises (typically start-up companies) as being most representative of the entrepreneurial approach (see, e.g., Gibb, 2005); the discussions were recorded, transcribed and analysed. Third, each teacher planned and carried out individual experiments in his or her own classroom.

This part of the research presents the teachers' first development experiment conducted during the spring of 2014, after forming common definitions of work life and entrepreneurship as a method in general education. The common definitions are

here described as a background for the current part of the research. After the phase presented here, the next step in the entire research will be a common assessment of the first experiment. On that basis, each teacher will plan their second development experiment for the autumn of 2014.

For the current part of the research, the research questions are as follows:

1. How do teachers implement a relationship to work life and entrepreneurship in their learning environment settings?
2. To what extent do the implementations refer to the definitions of work life and entrepreneurship in previous researches?

The data consists of six independent semi-structured reports and evaluations of the first experiment periods of the teachers. The experiment and report of one of the seven teachers was not completed by the time the analysis began, so it was excluded from the data. However, the background data (Table 1 and Table 2) presented in the next paragraph consists of the data collected from all seven teachers.

Each teacher included 7 to 10 lessons in the experiment period. The supervisor of the project (one of the authors) visited each learning environment once, except the lessons of the guidance counsellors, since the guidance counsellors had mainly confidential discussions with a learner and those are not allowed to be observed. Otherwise, the supervisor observed, assessed and facilitated the teachers' solutions through face to face discussions, facebook, phone conversations and e-mails with each teacher.

The analysis of the data is based on theory-guided content analysis (Krippendorff, 2004). The guiding theory is built mainly on some previous studies about work-related learning, work integrated learning, and entrepreneurial learning; however, both authors analysed the data independently, first, by searching concepts which described the learners' activities and opportunities or limits for them in the learning environment settings. With these steps, the authors confirmed the analysis to be as objective as possible (Altrichter et al., 2008). Secondly, the concepts were connected

and formulated into more general concepts, which were considered against the previous research.

Teachers' previous understanding and aims for experiments

In this research, the teachers were encouraged to discuss their understanding of work-related and entrepreneurial activities based on their previous knowledge. After the discussions, they were given some existing definitions of entrepreneurship education and entrepreneurial concepts, for example, some of Gibb's (2005) definitions. Table 1 shows what kind of activities the teachers found crucial in a relationship to work life and entrepreneurship.

Table 1. Teachers' definitions of learners' work-related and entrepreneurial activities.

Learners' autonomy should be built on	In their communities, learners should be
✓ Own ideas	✓ Confronting others in a non-prejudicious way
✓ Previous experiences	✓ Responsible for others
✓ Initiative	✓ Influential
✓ Own strengths	✓ Interactive
✓ Self-responsibility	✓ Individually and collaboratively self-guided, e.g. in searching for knowledge
✓ Having influence	✓ Supported by peer-learners
✓ Setting own goals	✓ Able and willing to network
✓ Self-guided knowledge searching, e.g. by exploiting information technology	✓ Able to relate their individual goals to common ones
✓ Creativity	✓ Willing to act for the common benefit (i.e., intra-preneurial activity)
✓ Encouragement to performing	✓ Creative

There is some resemblance between the teachers' definitions in Table 1 and Gibb's (2005) definitions. For example, initiative, responsibility, creativity, autonomy and

networking are common to both. Self-guidance can be seen as including action-orientation, determination, managing autonomously, self-belief, creative problem-solving and strategic thinking, all of which Gibb (2005) defined as entrepreneurial skills, attributes or behaviours. Hägg and Peltonen (2014) have noted that ethical and educational philosophical roots are missing in many pedagogical entrepreneurial solutions. However, teachers in this study emphasized some very basic ethical aspects of education, such as listening to others, treating everyone equally and respecting each other's personal lives. In addition, the teachers in this research emphasise learners' autonomy. In the previous research of Van Gelderen (2010), learners' autonomy was defined as consisting of decisional freedom, self-awareness, being conscious of one's goals and dreams, and further, making an effort towards them. Table 2 shows the teachers' first thoughts about supportive and hindering practices when planning their learning environment arrangements, and in implementing them in learning situations in general education.

Table 2. Teachers' implementations that hinder or facilitate learners' work life related and entrepreneurial activities.

Teachers as facilitators

- ✓ Confront each learner as valuable
- ✓ Listen and notice learners' ideas, experiences and knowledge
- ✓ Connect learning situations with learners' life through both ideas and benefit
- ✓ Organise space in learning situations for learners' parents, grandparents or other relatives as experts
- ✓ Widen learning environments toward nearby informal environment
- ✓ Exploit internal and external visits
- ✓ Plan and enact learning together with learners: everyone may learn
- ✓ Plan appropriate learners' days harmoniously and collaboratively with colleagues
- ✓ Promote themes and phenomena as content instead of little details

Teachers as hinderers

- ✓ Decide independently about the contents, methods, materials and vehicles concerning their lessons
- ✓ Plan strictly detailed lessons
- ✓ Plan lessons according to ready-made materials and guides
- ✓ Fear risks and avoid them

The teachers seem to accentuate the close connection between learners' real lives and the nearby environment as crucial factors when developing more work life related and entrepreneurial learning environments. In previous research, for example, Rae (2007) has emphasized combining formal and informal elements in entrepreneurial learning environments. Furthermore, Jackson (2006; 2010) defines work-integrated learning as including both formal and informal learning.

After forming their common definitions and understandings, the teachers planned their first experiments. Table 3 shows each teacher's school level, subject and self-determined aim for the experiment. Despite working in different schools, the two guidance counsellors designed a common plan and enacted it individually, meaning that there are a total of six plans.

Table 3. Teachers' aims in the first learning environment experiments.

Teacher	School level	Subject	Aim for the first experiment
A	Class teacher, 2nd grade	Mathematics	To offer three methods to practice and learn mathematical tasks, enabling learners to make facilitated but self-guided decisions and experiments.
B	Class teacher, 4th grade	Environment and nature studies	To enable more learning-by-doing. To connect content with learners' real lives through their hobbies, parents' professions and know-how, and grandparents' know-how.
C	Class teacher, 6th grade	Many subjects	To enable and facilitate learners' work life related activities implemented in practical projects outside school, to be exploited as methods in learning situations in the classrooms.
D	Subject teacher, 9th grade	Swedish language	To enable and facilitate learners to evaluate which parts of the Swedish program in basic education they need to strengthen before the national exam and how they want to go about it.
E	Subject teacher, 9th grade	English language	To consider with learners the ways in which they can work with subjects before the English national exam, to encourage each to act with other peer-learners and to encourage each to share knowledge democratically.
F	Guidance counsellors, (two independent) upper secondary schools	Guiding learners' learning paths during general education, and for professional studies after general education	To encourage learners to participate more actively in their learning processes and paths and in planning for life and a career after general education. To connect a learners' life by including hobbies as a more essential part of both their learning methods and future plans. To give more space to learners' ideas and thoughts in guiding materials and interactive guiding sessions.

It seems obvious from teachers' definitions of their learners' activities and their own learning environment settings that learners' autonomy is a first step in entrepreneurship education (see van Gelderen, 2010). In addition, they seek to connect the learner's entire life, including their ideas, experiments, parents, grandparents and the nearby environment, as part of their work life related and entrepreneurial learning environments. Many of the plans propose that learners experiment and make decisions among various opportunities, both given and discovered. Learners' cooperation seems to be important, as well.

Teachers' work-related and entrepreneurial implementations and observations

The implementations and observations presented in this paper are based purely on the reports written by the participating teachers. It should be noted that the reports cannot reflect everything that has happened in the learning environment settings, but

the matters that the teachers have chosen to highlight. In addition, when interpreting the research results, it should be kept in mind that the concepts of ‘work-related’ and ‘entrepreneurial’ are essentially considered in this paper from the point of view of certain previous research. It is likely that the results might appear differently in light of other types of sets of theories in the research field. Thus, the results of this study should be considered merely as suggestive. The results of the current part of the research are presented below in Table 4.

Table 4. Teachers' observations about the learners' work-related and entrepreneurial activities in learning environments during the experiment periods.

Activities	work-related	entrepreneurial
Collaboration	X	X
Individual and communal participation in planning and goal setting		X
Individual and communal participation in studying/action, reflection and evaluation	X	X
Recognizing and exploiting opportunities in nearby surroundings, including e-learning environments	X	X
Recognizing, evaluating and grasping opportunities		X
Developing and creating opportunities		X
Creativity, Inventiveness, Innovativeness	X	X
Making decisions	X	X
Responsibility for learner's own choices/decisions and for others "good"	X	X
Training to tolerate uncertainty		X
Learning through mistakes	X	X
Finalizing tasks in time	X	
Managing/Leading learner's own studying, activity and life	X	X
Valuing each participant as equal and as an expert	X	X
Connecting learning methods and contents into the real world (life, work, firms) by visits and reflection	X	X

The results show that the learners have been able to practice activities related to both work life and entrepreneurship. However, there seem to have been slightly more activities related to entrepreneurship than work life. Essentially, the teachers seem to emphasize learners' active participation in each phase of learning and activities that foster cooperation and communality. In addition, they connect learning to real life in various ways.

The teachers tend to facilitate the learners' to take action in leading their own studying, activities and life. In previous research, for example, Jackson (2006) points out that in a good learning environment, the learners are the ones who create, lead and operate (see also Gibb, 2005; Jones & Iredale, 2010; Kyrö, 2008). Further, the teachers seem to think that it is important to promote learners' individual and communal participation already in planning and goal setting phases. In the research field of entrepreneurship education, for example, Kyrö

and Carrier (2005) have emphasized the importance of the learners' own planning and goal setting. Van Gelderen (2010) states that learners' autonomy is essential in fostering entrepreneurial learning. He refers to self-determination and self-regulation theories when defining autonomy (Reeve *et al.*, 2008) and claims those serve as the first part of entrepreneurial activity. In addition, Bratton (2005), in the research field of work life, has noted the importance of self-regulation and autonomy, when developing work life activities. Also Dwerryhouse (2001) maintains that it is important to learn to be independent.

Reflection is one integral part of self-determination and self-regulation (see Van Gelderen 2010). The teachers in this study not only seem to highlight learners' participation in studying and learning activities, but they further connect these to reflection and evaluation. Reflection and evaluation both refer to work life (Bratton, 2005; Dwerryhouse, 2001; Jackson, 2006) and to the entrepreneurial knowledge building process (Draycott & Rae, 2011; Hietanen, 2012; 2014; see also Hietanen & Järvi, 2015).

The teachers seem to emphasize learners' responsibility as well. Making decisions and taking responsibility for one's own choices are factors that, for example, Jackson (2010) and Bratton (2005) accentuate in work life. In the research field of entrepreneurship, Gibb (2005) accentuates both decision-making and responsibility. Being responsible for others' "good" seems to be common in the teachers' learning environment experiments. When an individual starts to take care of others in the community and the welfare of the whole organization, it is defined as intrapreneurial activity (Gapp & Fisher, 2007). Intrapreneurship is one of the essential phases when, for example, nascent entrepreneurs working as ordinary employees make efforts to develop their entrepreneurial activities (Hietanen, 2013). Thus, the responsibility for common good refers to both work life and entrepreneurship.

Some researchers see opportunities, especially the possibility to compare, assess, experiment and exploit, and even create them, as an essential entrepre-

neurial element (e.g., Gibb, 2005; Rae, 2007; Shane & Venkataraman, 2000; Venkataraman *et al.*, 2012). In the theories presented in this paper, none of the scholars in the field of work life mentions the possibility to experiment, test and create opportunities as a requirement for a good workplace. Thus, this is one of the differences when comparing general work life and entrepreneurship. Some scholars (e.g. Kyrö, 2006; Hägg & Peltonen, 2014) have named psychological and social risk-taking as an activity clearly referring to entrepreneurship instead of to ordinary work life. The teachers in this study did not mention the concept of risk, however, they mentioned tolerating uncertainty, learning through mistakes and making decisions, which all include risk-taking.

Creativity, inventiveness and innovativeness are features that are strongly present in teachers' implementations. For example, according to Gibb (2005), Jones and Iredale (2010) and Kyrö (2006; 2008) these features connect clearly with entrepreneurial activities. Added to these, for example, Bratton (2005) emphasizes the significance of innovativeness in developing work life activities. In many cases,

the teachers seem to take into account the learners immediate surrounding when planning and enacting learning situations. These surroundings may include e-learning environments, learners' relatives, free-time activities and so on. It appears characteristic of the teachers' implementations to combine formal and informal learning situations by exploiting the physical nearby surrounding and various experts, such as relatives and work life specialists. The importance and exploitation of nearby surroundings is acknowledged both in research concerning work life (Dwerryhouse, 2001; Jackson 2006; 2010) and entrepreneurship (Rae, 2007). For example, Billet (2002) has studied guided learning in the workplace.

The teachers consider cooperative activities, both pair and group work, as important in the learning environment settings. These kinds of teamwork activities relate to both work life and entrepreneurship. In previous research, for example, Billet (2002) has emphasized the importance of co-participation, and especially the role of peers as guides. In addition, Baker and Henson (2010) give weight to

communication and teamwork abilities in work life, and Jackson (2006) accentuates co-operation and everyone's participation in working activities. In the research field of entrepreneurship, for example, Gibb (2005) considers negotiating an entrepreneurial skill and networking as a part of entrepreneurial behaviour. In some entrepreneurship education research covers both individual and communal self-guidance, in addition to peer-learning, which are considered integral (e.g. Hietanen, 2012; 2014; Hietanen & Järvi, 2015; Kyrö, 2006). Generally, the role of the community and cooperation in studying is emphasized in the research related to both work life and entrepreneurship.

Finally, the teachers value all learners equally and they use activities that promote this kind of thinking in each of the learners, as well. It is worth mentioning that equality in general is a strong value in Finnish education. The teachers in this study emphasize the role of peers in learning and see each learner as an expert.

Conclusions

Entrepreneurship, which is a special part of work life, has been familiarized in general education for over twenty years in Finland. However, only a few Finnish teachers in the field of comprehensive or upper secondary schools have studied entrepreneurial contents during their initial teacher education. Instead, they have studied contents that are defined in the curricula and pedagogics. However, teachers should have knowledge about the phenomena they are supposed to teach. Therefore, many entrepreneurship courses and programmes have been organized as continuing education for teachers in general education. Until now, many programmes have been based on the knowledge and ideas of outside experts. The project of which this research is a part, has been built on the idea that the starting point in a work-related and entrepreneurial development should be with the teachers' understanding about the phenomena.

It seems, according to previous research, that Finnish teachers often understand and implement entrepreneurship education in the business-related framework. They may even try to find certain learners who are interested in business and further focus on offering them possibilities to practice entrepreneurship for example in a kiosk business. However, in this research, all teachers strongly emphasized each learner's right to participate equally and duty to respect others as equal. In summary, the teachers seem to implement activities related to work life and entrepreneurship in their learning environment settings and at the same time they take into account all learners. These features came to light in the data rather effortlessly so it can be concluded that the teachers presumably are quite aware of learners' objectives, as participating actively in their communities.

It should be noted that the current research has been carried out in quite a short time and that there are only a few teachers in the data. The supervisor of the project has noticed that she should have paid more visits to each of the schools since the teachers did not seem to have gotten enough facilitation. That might be

a reason for the wide variation in the forms of the teachers' semi-structured reports. However, each teacher carried out and reported his/her experiments completely independently. Added to this, the authors independently conducted the first phases of the analysis. After the first step of analysis, they connected their findings and analysed them further in collaboration.

Based to these matters, it can be concluded that the results of this research can be exploited when developing learning environment settings that relate work life and entrepreneurship with a non-business context. Despite the fact that the learning environment settings clearly have implementations that relate to work life, entrepreneurship and real life, learners' contacts to entrepreneurship and actual work life could be increased; and in other respects than as consumers. It would be beneficial for the learners to hear and see from all kinds of actual workers and entrepreneurs what are generally valued and needed skills, attributes, and activi-

ties in work life. Through reflective discussions based on these contacts the learners could become more capable to take part in planning their learning processes related to work life and entrepreneurship.

Acknowledgements

The paper focuses on one essential issue concerning both the theoretical and practical basis of and judgements for teachers' experiments in the YriTy project. In this project, seven teachers in comprehensive schools and general upper secondary schools in Northern Finland are developing, by means of research-based experiments, their teaching practices regarding entrepreneurship and work life. The correspondent author is the designer and leader of the project, which will last 15 months during the years 2014-2015. Project funding comes from the European

Social Fund and locally from the North Ostrobothnia Centre for Economic Development, Transport and the Environment, which comes under the administrative branch of the Ministry of Employment and the Economy.

References

Altrichter, H., Feldman, A., Posch, P & Somekh, B. (2008). *Teachers Investigate their Work. An introduction to action research across the professions*. Second edition. Oxon: Routledge.

Anderson, A.R., & Smith, R. (2007). The moral space in entrepreneurship: an exploration of ethical imperatives and the moral legitimacy of being enterprising, *Entrepreneurship & Regional Development,* 19 (6), 479-497.

Anderson, T. & Shattuck, J. (2012), Design-based research. A decade of progress in education research, *Educational Researcher,* 41 (1), 16-25.

Baker, G. and Henson, D. (2010), Promoting employability skills development in a research-intensive university. *Education + Training*, 52 (1), 62-75.

Barab, S. (2002). Design-Based Research. A Methodological Toolkit for the Learning Scientist. In K. R. Sawyer (Ed.), *Cambridge Handbook of the Learning Sciences* (pp. 153-171). West Nyack, NY, USA: Cambridge University Press.

Billett, S. (2002), Workplace pedagogic practices: co-participation and learning, *British Journal of Educational Studies*, 50 (4), 457-481.

Blenker, P., Frederiksen, S. H., Korsgaard, S., Moller, S., Neergaard, H. & Thrane, C. (2012), Entrepreneurship as everyday practice: towards a personalized pedagogy of enterprise education, *Industry* & *Higher Education,* 26 (6), 417-430.

Bratton, J. (2005). Work redesing and learning at work: a win-win game? In: E. Poikela (Ed.) *Osaaminen ja kokemus: työ, oppiminen ja kasvatus [Competence and experience: work, learning and education]* (pp.101-129). Tampere: Tampere University Press.

Draycott, M. & Rae, D. (2011). Enterprise education in schools and the role of competency frameworks, *International Journal of Entrepreneurial Behaviour and Research,* 17 (2), 127-145.

Dwerryhouse, R. (2001), Real work in the 16-19 curriculum: AVCE business and Young enterprise, *Education + Training*, 43 (3), 153-161.

European Commission. (2012), *Entrepreneurship Education at School in Europe. National Strategies, Curricula and Learning Outcomes*. Available online: http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf , accessed 8 September 2013.

Fayolle, A. (2013). Personal view on the future of entrepreneurship education. *Entrepreneurship and Regional Development: An International Journal,* 25 (7-8), 692-701. doi:10.1080/08985626.2013.821318

FNBE (2003), National Core Curriculum for Upper Secondary Schools 2003. *Finnish National Board of Education*. Available online: http://www.oph.fi/download/47678_core_curricula_upper_secondary_education.pdf, accessed 18 June 2014.

FNBE (2004), National Core Curriculum for Basic Education 2004, pp. 36-116. *Finnish National Board of Education*. Available online: http://www.oph.fi/download/47675_POPS_net_new_2.pdf, accessed 18 June 2014.

Gapp, R. and Fisher, R. (2007), Developing an intrapreneur-led three-phase model of innovation, *International Journal of Behaviour and Research*, 13 (6), 330-348.

Garnett, J. (2013). Enterprise pedagogy in music: an exploration of multiple pedagogies. *Music Education Research*, 15 (1), 1-18.

Gibb, A. (2005). The future of entrepreneurship education – Determining the basis for coherent policy and practice? In P. Kyrö & C.Carrier (Eds.), *The dynamics of learning entrepreneurship in a cross-cultural university context* (pp. 44-67). Hämeenlinna: Research Centre for Vocational and Professional Education.

Hägg, O. & Peltonen, K. (2014). Towards a conceptual understanding of entrepreneurial pedagogy. In Kyrö, P. (Ed.) *Yrittäjyyskasvatuksen aikakauskirja [Journal of entrepreneurship education]* 1/2014 (pp. 21-44.). Yrittäjyyskasvatuksen tutkimusseura ry [Scientific Association for Entrepreneurship Education], Helsinki.

Hietanen, L. (2012). Tänään soitin vain kitaraa, koska innostuin. Tapaustutkimus yrittäjämäisestä toiminnasta perusopetuksen 7. luokan musiikin oppimisympäristössä, [Today, I played just the guitar because I became enthusiastic about it. A case study of enterprise action among seventh-graders in the music learning environment]. Doctoral thesis, University of Lapland. Tampere: Juvenes Print. Available online in Finnish (abstract in English):

https://www.doria.fi/bitstream/handle/10024/76736/Lenita_Hietanen.pdf?sequence=1 , accessed 5 March 2013.

Hietanen, L., (2013) From Employee to Entrepreneur through Reflecting Intrapreneurial and Entrepreneurial Activity? 3EC Conference. Inaugural ECSB (European Council for Small Business and Entrepreneurship) *Entrepreneurship Education Conference, 29-31 May 2013*, Århus, Denmark.

Hietanen, L. & Järvi, T. (2015),"Contextualizing entrepreneurial learning in basic and vocational education", *Journal of Enterprising Communities: People and Places in the Global Economy*, 9 (1), 45-60.

Hietanen, L., Uusiautti, S. & Määttä, K. (2014). Enhancing entrepreneurship in learners – an implementation and evaluation of entrepreneurship education through music education. *Problems of education in the 21st century*, 59, 33-48.

Hytti, U. & O'Gorman, C. (2004) What is "enterprise education"? An analysis of the objectives and methods of enterprise education programmes in four European countries. *Education + Training,* 46 (1), 11-23.

Jackson, N. (2006), Work Integrated Learning in the UK: An Overview, Working paper as background for a workshop at the World Association for Cooperative Education International Symposium Work Integrated Learning, University of Westminster, 16-18 November.

Jackson, N. (2010). From a Curriculum that Integrates Work to a Curriculum that Integrates Life: Changing a University's Conceptions of Curriculum. *Higher Education Research and Development, Work Integrated Learning Special Issue* 29 (5), 491-505.

Jones, B. & Iredale, N. (2010). Viewpoint: Enterprise education as pedagogy. *Education + Training,* 52 (1), 7-19.

Jones, B. and Iredale, N. (2014), Enterprise and entrepreneurship education: towards a comparative analysis, *Journal of Enterprising Communities: People and Places in the Global Economy*, 8 (1), 34-50.

Krippendorff, K. (2004). *Content analysis. An introduction to its methodology.* Thousand Oaks, CA: Sage.

Kyrö, P. & Carrier, C. (2005). Entrepreneurial learning in universities. Bridges across borders. In: Kyrö, P. & Carrier, C. (Eds.) *The dynamics of learning entrepreneurship in a cross-cultural university context* (pp. 14-43). University of Tampere.

Kyrö, P. 2006. Avauksia riskin oppimiseen ja opettamiseen. [Openings in learning and teaching risks] In: P. Kyrö & A. Ripatti (Eds.) *Yrittäjyyskasvatuksen uusia tuulia [New winds of entrepreneurship education]* (pp.98-131). Tampere: Tampere University Press.

Kyrö, P. (2008). A theoretical framework for teaching and learning. In J. Loima (Ed.) *Facing the Future* (pp.147-177). Helsinki: Palmenia.

Mwasalwiba, E.S. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education + Training,* 52 (1), 20-47.

Pepin, M. (2012). Enterprise education: a Deweyan perspective. *Education + Training,* 54 (8/9), 801-812.

Pittaway, L. & Edwards, C. (2012). Assessment: examining practice in entrepreneurship education. *Education + Training*, 54 (8/9), 778-800.

Rae, D. 2010. Universities and enterprise education: responding to the challenges of the new era*. Journal of Small Business and Enterprise Development.* 17 (4), 591–606.

Rae, D. (2007). *Entrepreneurship. From opportunity to action.* New York, NY: Palgrave Macmillan.

Reeve, J., Ryan, R., Deci, E. L. & Jang, H. (2008). Understanding as Promoting Autonomous Self-Regulation: A Self-Determination Theory Perspective. In: D.H. Schunk & B. J. Zimmermann (Eds.) *Motivation and self-regulated learning: theory, research and applications.* New York. Lawrence Erlbaum, 223-244.

Seikkula-Leino, J., Ruskovaara, E., Ikävalko, M., Mattila, J., & Rytkölä, T. (2010). Promoting entrepreneurship education: the role of the teacher? *Education + Training,* 52 (2), 117-127.

Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review,* 25 (1), 217-226.

Suonpää, M. (2013). *Constructing an opportunity centred collaborative learning model in higher education through and for entrepreneurship.* (PhD. Diss. Jyväskylä Studies in Business and Economics, University of Jyväskylä, Jyväskylä, Finland.)

Van Gelderen, M. (2010), Autonomy as the guiding aim of entrepreneurship education, *Education + Training*, 52 (8/9), 710-721.

Venkataraman, S., Sarasvathy, S. D., Dew, N., & Forster, W. R. (2012). Reflections on the 2010 AMR decade award: Whether the promise? Moving forward with entrepreneurship as a science of the artificial. *Academy of Management Review;* 37 (1), 21-33.

Welter, F. and Smallbone, D. (2011), Institutional Perspectives on Entrepreneurial Behavior in Challenging Environments*, Journal of Small Business Management*, 49 (1), 107-125.