



## Sheet of the second process of developing transversal skills as a part of practical training

<b>I.</b>	<b>No. of intellectual work result</b>	O5	<b>II.</b>	<b>Testing period</b>	27 February 2017 - 31 October 2017
<b>III.</b>	<b>Partner conducting testing</b>		<b>CENTRIA UNIVERSITY OF APPLIED SCIENCES</b> .....		

### Process presentation

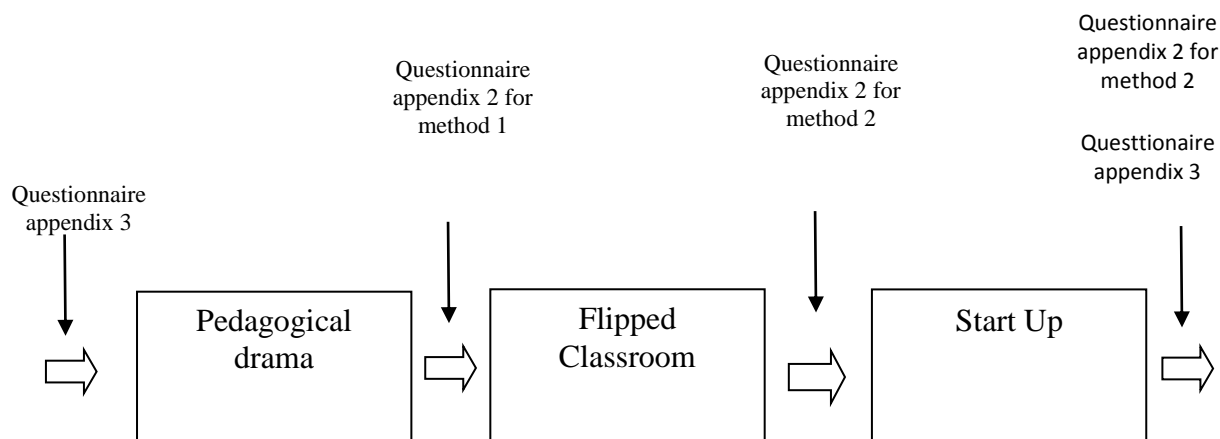


Figure 1. Application of practical teaching methods in process 1

Number of method in the process	Practical teaching method	Quartile	Rank	Entrepreneurship (E)	Creativity (Cr)	Communicativeness (Com)	Teamwork (T)	Group of methods	Result
1.	Pedagogical drama	I	19	0.77	1.00	0.72	1.00	Other methods	3.49
2.	Flipped Classroom	II	43	0.95	1.08	0.88	0.92	Other methods	2,99
3.	Start Up	II	5	1,29	1.25	0.72	0,75	Other methods	4,01



## 1. Analysis of the ways of using practical teaching methods selected for the process of developing transversal skills

Methods	Analysis
<p><b>Pedagogical drama</b></p>	<p>1.1. Pedagogical drama means experiential, collaborative and problem-solving oriented learning approach to the work, taking advantage of the drama and the students' ability to express improvised drama situation. Drama is an auxiliary method used in diverse teaching subjects. The aim of the person who conducts drama is to create a fictitious situation in which participants can assume various roles. Conducting drama consists of the following phases: introduction by the class tutor (discussing the initial situation giving rise to drama fiction), preparing participants to assume roles, playing the roles by participants and analyzing students' work.</p> <p>Role-playing is used teaching various subjects in NY Star Up –course at the Faculty of Management Engineering at Centria University of Applied Sciences in Ylivieska. Ny Start Up –course is an entrepreneurship course, 10 credit points, and it is elective course.</p> <p>Students, working in two-or-three-person groups, can play the roles of the owner of the company, consultants, bookkeeper, customer, the financier of the company or a buyer in various phases of the selling process, regarding of the problems, playing the roles of team members striving after resolving a conflicts and problems, which they might have in business at their start-up companies. The teams receive scenarios, which contain descriptions of, among others, business entities represented by the teams and negotiation aims. The teams attempt to obtain the highest possible economic and financial benefits.</p> <p>Drama develop the skills and abilities that entrepreneurship education is to support and which is also valued in many different field of work. Drama develops students' self-expression and comprehension, as well as independent mindset and trust in him/herself. It will also strengthen communication skills, as well as the communal discussion and problem-solving abilities. In practice, you can be utilized in many different drama techniques, such as workshops, or based on a number of different drama working models. In general, the process is carried out for the drama (Brennan &amp; Pearce, 2009) on the basis of the group's instructions and drama to be presented at the end of the work of the other members of the learning community. Role-playing can also be used during classes where other subjects are taught, e.g. selling the products or services, marketing the start-up companies, social, interpersonal and business communication, and decisions making.</p>
	<p>1.2. In this case the drama will be used estimating the future and continuing development of the NY Start Up companies, which students have established (idea development, cooperation, planning for the future, consulting other companies of</p>



students with their problems for example getting new customers, bettering the products or services, lowering the costs, getting more benefits, even closing the business). It is recommended to adopt the following assumptions related to using drama in order to accelerate an increase in skills that make up transversal competences. Drama-based instruction generates and cultivates many cognitive skills. Of these skills, the following are important for ensuring a student's success in school:

- language and communication abilities
- problem-solving / critical thinking skills
- decision making capabilities
- creativity and imagination
- collaboration skills.

A/ Using drama, first and foremost to develop skills connected with students' entrepreneurship, creativity, teamwork and problem solving.

B/ Drama used in the development of entrepreneurship may assume multiple forms. Students can play the roles of consultants, stakeholders and customers (suppliers, intermediaries, bankers, firms financing entities in early phases of development – venture capital, clients, representatives of authorities offering grants, family members, etc.).

C/ Among those asking questions there should be invited entrepreneurs, representatives of chambers of commerce and industry, tutors teaching other subjects, etc.

D/ The general aim is to make students aware of different evaluations of business ideas. The class tutor specifying rules related to asking questions must seek to increase skills connected with: initiating and accepting changes, perceiving and critically evaluating entrepreneurial opportunities, planning and creating new unique solutions, taking rational risk, changing ideas into specific activities.

E/ The general concept of the transversal competences developmental process would be the following: using methods of creative solutions to problems geared towards divergent thinking, e.g. deferred valuation techniques, students generate and evaluate their business better.

**1.3** Drama will be used within the NY Start UP/ Entrepreneurship –course. The students at the third-cycle level at the Faculty of Management Engineering, full-time studies, 6<sup>th</sup> semester, specialization – (15 hrs of lectures and 15 hrs of tutorials. Totally this course is 270 hours, students are at university on Mondays during 5 months and other days they are working out of school at their start-ups.).

Two meetings are planned on 27<sup>th</sup> of February and one week before the meeting day students has gotten the task to find out and analyse their start-up companies, what kind of problems do they have in business. This meeting starts with a questionnaire 3, which aim is to measure the transversal competences, before



	<p>using these methods testing.</p> <p><b>Meeting I</b> - (time of duration: 15 min.)</p> <ul style="list-style-type: none"> <li>- Introduction to drama (general rules, types, applications). The type of drama to be used will be based on interpretations, which often bring new perspectives to the subject matter and the presentation of work is largely a symbolic level, and thinking, which is used, when you want to evaluate and review the events, develop new solutions etc.</li> <li>- Choice of subject matter – continuation of the concept developed as a result of business problems within the Start Up companies grounded by the students. (15 min.)</li> <li>- Dividing students into groups – minimum 5 persons in each group</li> <li>- Discussing the rules of proceeding during the implementation of drama. (15 min.)</li> </ul> <p>The class tutor must ensure fair and equal rules of participation (number of utterances, right to speak) for all the participants.</p> <p>The students make videos of the problems of their companies. And plans what kind of drama they would have. They have 90 minutes time to make that.</p> <p><b>B. Meeting II</b> – it is recommended that the meeting be held directly after meeting I. Drama is summarized by encouraging all the participants to choose the most interesting ideas for companies development and the most interesting solving problems of the Start Up companies, which students are going to make. Students' roles are company's owner, consultants, stakeholders, customers, bookkeeping, marketing manager etc.</p> <p>The last stage of the method ends with a questionnaire 2, which aim is to evaluate an increase in students' transversal competences as a part of practical training with a questionnaire to measure the dynamics of changes in the evaluation of acquired transversal competences (level of changes) (Appendix 2 to the instruction). All students participating as testers in the tested processes of practical training take part in the survey. Meeting II will be summarized with a discussion on the efficiency of drama methods and their potential application in solving educational, professional and common social problems. (30 mins.)</p>
<p><b>Flipped classroom</b></p>	<p>2.1 Flipped classrooms redefine in-class activities. In-class lessons accompanying flipped classroom may include activity learning or more traditional homework problems, among other practices, to engage students in the content. Class activities vary, but may include: in-depth laboratory experiments, original document analysis, debate or speech presentation, current event discussions, peer reviewing, project-based learning, and skill development or concept practice.</p> <p>The flipped classroom intentionally shifts instruction to a learner-centred</p>



model in which class time explores topics in greater depth and creates meaningful learning opportunities, while educational technologies such as online videos are used to deliver content outside of the classroom. In a flipped classroom, content delivery may take a variety of forms. Often, video lessons prepared by the teacher or third parties are used to deliver content, although online collaborative discussions, digital research, and text readings may also be used. Students can use in this method their own videos, which they made in drama lessons.

When making use of a flipped classroom during solving a problem, students work in a group, actively listen to each other, look for creative solutions and communicate effectively with each other in order to present their opinions.

Students can use the materials in internet at <http://nystartup.fi/> -pages in this method.

2.2. A teacher's interaction with students in a flipped classroom can be more personalized and less didactic, and students are actively involved in knowledge acquisition and construction as they participate in and evaluate their learning.

#### Flipped learning + Peer instruction

Interactive method based on collaborative work that has proven effective in areas such as science, technology, engineering and mathematics.

Specifically consists of sharing with other students a different response to their own and explain the reasons that support the same to learn from each other. In this process the reasoning beyond the answers is analyzed.

#### Flipped learning + cooperative learning

There may also be a symbiosis or complementation between the flipped classroom technique and cooperative learning. Schoolwork, also commonly known as "homework", is done jointly and in cooperation with the group as the teacher moves the time spent explaining the subject to the flipped classroom method. In this way, the student has to assimilate and understand the content of more theoretical weight at home, through the recordings made by the teacher, and the time in class is dedicated to the development of tasks and problem solving and / or doubts through cooperative learning.

#### Flipped mastery learning

When the invested learning model is applied in a more advanced way. Educators begin by organizing content around specific goals. Students work on course content at their own pace and upon reaching the end of each unit, they must show mastery of learning objectives before moving on to the next topic and so on (Bergmann and Sams, 2013). Students can show evidence of



their learning through videos, worksheets, experimental stories, programs, projects, examples, among others. There are two challenges in the flipped-mastery model: the first is to deliver instruction to students when they have different levels of learning and understanding of the subjects.

#### Flipped learning + gamification

A step forward in the flipped-mastery model would be to include gamification elements in the learning process. Gamification is the application of game mechanisms in situations not directly related to games. The basic idea is to identify what motivates a game and see how it can be applied in the teaching-learning model. The results of the fun theory research have showed that fun can significantly change people's behavior in a positive sense, the same effect it has on education.

A/ Using a flipped classroom primarily, to develop competences connected with teamwork, creativity and students' communicativeness.

B/ When using a flipped classroom during classes, students should prepare instructions for using this method. Instructions should contain necessary information for students in order to execute a task:

Having used a flipped classroom, students get a better understanding of a given problem, are able to indicate a solution and draw conclusions.

2.3 Scheme of using the flipped classroom method. We are using this method at 3<sup>rd</sup> of April with the same students as used pedagogical drama.

The students have one-week time earlier to become familiar with flipped classroom method as homework.

#### **I Meeting: Introductory stage:**

- familiarizing students with the main aims of the activity,
- dividing students into groups,
- specifying the duration of work,
- presenting the subjects of the lessons. (15 mins.)

The students are working 5 member's teams, and choose some of these subjects: New business operations, Bookkeeping, and Marketing. The teams have time to make presentations of each theme and decide how to present theme to others. (90 mins.)

Presentations: teaching in groups the themes to other students. Each team has 15 minutes + 10 minutes discussing. (75 mins.)

The last stage of the method ends with a questionnaire 2, which aim is to evaluate an increase in students' transversal competences as a part of practical training with





	<p>a questionnaire to measure the dynamics of changes in the evaluation of acquired transversal competences (level of changes) (Appendix 2 to the instruction). All students participating as testers in the tested processes of practical training take part in the survey. Meeting will be summarized with a discussion on the efficiency of flipped classroom methods and their potential application in learning. (30 mins.)</p>
<p><b>Start Up</b></p>	<p>3.1 NY Start Up is a university course where students will be able to form a student company. Students can create their own ideas and test them in the real market using real money.</p> <p>The goal of the program is to create and test students' own idea or object of passion. Students have an opportunity to get a glimpse into the world of entrepreneurship without great financial risks. As a bonus, students have a possibility to create a business operation afterwards or develop important networks for the future.</p> <p>Startup is a practical teaching method learning by doing. Junior Achievement Start Up Program is aimed at university and college students. The program is carried out as a part of the institution's own curriculum. The program's requirements may be changed to suit individual institutions. This flexibility enables the program to fit the goals of different curricula without forgetting creativity and enthusiasm.</p> <p>JA Finland's goal is to advance entrepreneurial attitude and an active lifestyle among Finnish youths by increasing their knowledge of entrepreneurship, providing entrepreneurial experiences, enhancing readiness for working life and financial management skills.</p> <p>JA wishes to encourage and support universities to open their doors for the surrounding society. JA programs include pre-designed roles for business volunteers, which make bridging the gap between schools and companies easier.</p> <p>3.2 NY Start up is a practical hands on learning model for entrepreneurship, testing students' ideas in practice, and improving working life skills. NY Start Up -company is a motivating learning environment for the students and they can work many months within their own idea. This will convert the normal school only the learning goals to a real-life experience.</p> <p>This course started in October and it is in process until the end of April as a part of JA (Junior Achievements) Entrepreneurs and NY Start Ups. Students have made Business Canvas and Business Plans in this course and now their companies is in working. In February, March and April the students have business in their companies, working as a real start ups.</p> <p>This method is learning by doing: A Student Company is a practice</p>



company founded by students during their studies. A Student Company operates on real money, selling tangible products, and services to their real customers. NY Start Up is a program designed to change mindset of a student from passive learner to active and entrepreneurially minded future maker.

The company will function as a test lab for students' ideas, provide a possibility to put working life skills into practice, and give students' a picture of what it is like to work in a small private company.

Personal skills are general working life capabilities such as interaction, negotiating and teamwork skills. These are learned through idea development, negotiations with stakeholders and customer meetings.

Business skills have to do with starting an enterprise and the abilities learned during the process such as marketing(in person, digital), accounting basics(cost accounting and financial management), group motivation and spotting strengths (leadership, organisation).

Development of innovation skills is a process from idea creation and evaluation of operational environment to idea's productization and piloting to the right customers.

Also JEDU (Jokilaaksojen koulutuskuntayhtymä - the second grade in this area) has students' Start Ups as a method of teaching. They have cooperative company, where the students can go to the practical training and those entrepreneurs support the education in Jedu in that way. And students go working to these companies as practical training and at the end of the training students have the skills testing. There are teachers and entrepreneurs to evaluate them.

One of our students has made a presentation of the cooperative company of pupils of Jedu and Centria students have evaluated the method and its benefits for having the same kind of company also with students of Centria, which might be possible in the future.

The students of start ups of Centria have visited many of those companies behind the Jedu, sponsors of Jedu and Centria, and also entrepreneurs have visited the start up course of Centria. For example some CEOs from those companies has been teaching to start up students the marketing and the management. And also the students who have the consulting companies have had negotiations with the companies for getting them customers. So those companies are also the customers of students' start ups. Also the financing and insurance companies have had negotiations and cooperation with start up companies of students, because these start ups need financing.

In April there are in Helsinki, the capital of Finland, the final happening to start ups of all university and colleges as a competition and there will





elect the best students' best start up in Finland in the year 2017. There will be 2 best of our companies from Centria and also Jedu sends to Helsinki Final some start up companies of Jedu's pupils. All students' companies will take part of this happening and follow the competitions.

3.3. JA Start Up companies provide a basis for creativity and innovation and enable students to try their ideas in practice. They also see the profitability and risks of the business.

**Scheme of using Start up –method in the Week 17, on 24<sup>th</sup> of April, 2017. It is last time of the NY Start Up –course. Evaluating the NY companies, to close the company or make a real business. Self-estimates of the students, and coaches estimates, too. Decisions about the ending NY Start Up company or make Business succession.**

Starting with teachers (15 mins) telling what the seminar is containing and the content of the day.

**Presentations of the NY Start Up Companies and their Annual Reports:**

**These are students' companies, which they have established during this Start Up –course These are students' companies, which they have established during this Start Up –course and these companies are working during that course, they are working with real money and they have real customers from the companies. And after the start up -course students can decide to continue as an entrepreneurs or close the business. That is why they have final reports at the end of the course.**

**These are the students and their companies:**

**RP Mediaservice NY– Mattila Taneli, Alahäivälä Joon, Raudaskoski Joon & Vihtori Hänninen**

**Juha Valkola Consulting NY**

**Tuukka Liukko Consulting NY**

**SomeWelhot NY – Huusko Petteri**

**SEGOLL NY – Ollila Roope**

**Riitta Saarelainen Consulting NY**

**JOKILAAKSON KASTEPUU NY /BATI, The Baticm Tree, Matias Salmikangas & Jani Röytiö**



	<p><b>Johanna Arvola/Iiona lastenpukimo NY</b></p> <p><b>Mahtitukku NY/Jani Palola</b></p> <p><b>Jemily NY/ Jenny Mikkilä</b></p> <p><b>Hanne Vähäkuopus Ompelimo</b></p> <p>Students have already made innovation and planning (ideation, team, and business model), they have been planning the business (networking, validating the idea, operation plan), piloting and testing original ideas (contacting customers, validating the idea and evaluation), and they have established the NY Start Up –companies, running the business with real money and real customers. The Interim Report and the Annual Report. Have the students made themselves a possibility to create a business operation after graduating or develop important networks for the future? Preparing at home the reports and presentations.</p> <p>Now they had to estimate and evaluate the future and continuing development the company or close the business. (Idea development, cooperation, planning for the future, making better business plan, whether this business is profitable etc.). Also, peer review.</p> <p><b>Afternoon Seminar</b>, where all students have the presentation of their companies, annual reports and what kind of experience they have during these months, when they have planned their companies, made business plans, and started the business. (90 mins)</p> <p><b>The discussing part as a learning café.</b> Discussing about the future of start-ups and entrepreneurship. <b>(30 minutes)</b></p>
	<p>The last stage of the method ends with a questionnaire 3, which aim is to evaluate students' transversal competences as a part of practical training with a questionnaire to measure the dynamics of changes in the evaluation of acquired transversal competences. All students participating as testers in the tested processes of practical training take part in the survey. Meeting will be summarized with a discussion on the efficiency of start up -methods and students potential application in learning business and effect on attitudes and willingness to become entrepreneurs</p>