

PROJECT

FIND YOUR INNER INVENTOR

MANUAL FOR PH.D. STUDENTS



Co-funded by the
Erasmus+ Programme
of the European Union



Short manual for lectors and doctoral students

According to the authors and their research in the educational process, the main agents of change to the approach to new topics in teaching and the provision of necessary competences are the teachers. The concept of teaching has a major impact on the program implementation. The teacher is also the key in the choice of functional content of education and goes hand in hand with the emphasis on the ability to synthesize knowledge, discovery, student's engagement in practical activities, focus on creating new ideas, opening new perspectives and all of these are essential to encourage entrepreneurial mindsets and entrepreneurial ability.

The determining and indispensable factor of entrepreneurship education in accordance with this model is also stimulating environment, sharing of experiences and appropriate didactic tools, among which the most effective are those that support learning through experience (connected with coaching, mentoring, facilitation), simulation, experiment, creative problem solving, discussion, role-play and, last but not least, reflection on patterns and the outside world.

As Malach (2007) points out, understanding in entrepreneurship education should come primarily from personal experience and self-activity, the student's emotional involvement is necessary. In addition, entrepreneurship education should be flexible in supporting students to operate in the real world and respect the following principles:

- learning by doing - students penetrate the subject and gain knowledge through solutions and action components;
- encouraging students to find and explore broader problem-related concepts from a multidisciplinary perspective;
- to help students getting used to using data which they personally acquired, and assessing their use, along with more impersonal information;

- to help students develop more independent judgment when external sources of information and expert advice are concerned;
- to help students develop responses to conflict situations and encourage them to make decisions and commit themselves to actions under stress and uncertainty;
- to provide greater opportunities for networking with the outside world in relation to the student's field of study.

Source: Garavan and O'Connell, 1994 cited by Malach and Durda, 2007, p. 16-17.

One of the frequently discussed issues in entrepreneurship education are appropriate **methods**. Academic literature suggests a wide range of methods used, from lectures and presentations, video presentations to group discussions and role-playing. In particular, methods simulating the real business environment, so-called learning projects within real companies, are perceived as highly participatory and beneficial. Referring to Garavan (1994), entrepreneurship methods are spread between the dimensions of specific experience and abstract conceptualization and learning styles on a scale from active experimentation to reflective observation. As Malach points out (2007, p. 32), most of the current entrepreneurship education activities are based on the style of learning that Garavan calls reflective theoretical education. On the other hand, the teaching methods most relevant to entrepreneurial learning are those found in quadrant III. and IV, the so-called active learning styles. However, it is advisable to involve all learning styles - effective experience, reflective observation, abstract conceptualization and active experimentation (ibid.) For effective education and entrepreneurship education the practical knowledge is linked to theoretical reflection.



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III. Active applied Changes in skills and attitudes Role-play games Management simulation T-groups Educational planning books Management of the learning groups Counseling	II. Reflective applied Changes in the approach Applied lectures Case study Role-play games Tasks with emphasis on dealing with problems Program teaching with emphasis on skills
Active experimentation	Reflective observation
IV. Active theoretical Changes in understanding Argumentation activities Experiments Reading of recommended literature Text analysis Workshops Coaching	I. Reflective theoretical Changes in the knowledge Theoretical lectures Reading of recommended literature Handouts Program teaching with emphasis on content testing concepts

Methods of entrepreneurship education according to Garavan (1994), adjusted from Malach and Durda, 2007, p. 32

Appropriate organizational forms of teaching

We recommend using the following organizational forms of teaching from the long-term experience of already ongoing activities in entrepreneurship education and experience gained in the interconnected cooperation system of activities within the project.

Individual

It is a permanent contact of one teacher and one student. The teacher can always focus on the one student. The individual approach can be mainly used for interviews concerning work progress, possible problems or activities where the teacher can devote himself/herself to one student at all times.

Individualized

When having multi-student activities it is a good idea to take into account the individual differences of the students, their different dispositions, interests and needs, the current mental and physical condition.

This approach requires a perfectly elaborated plan and choice of activities and the division of a larger number of students into smaller groups of 4-6 people, where each group has its own leader. This approach allows students to have considerable freedom with which the student becomes responsible,

trains his/her will, has to rely on himself/herself and trains self-control.

Project-based

In project-based learning, students should with the help of the teacher, address a specific task (project) that is based on practical needs or is closely related to practice. This approach applies to the vast majority of talent development activities in science. Learning projects in activities lead directly to results, students can gain knowledge and qualification as well as rewards.

1. stage: Processing the intention of the project → intentions and targets of the project.

2. stage: Processing of the plan → dividing it into individual steps (time, place, attendance, tools, choice of the target group, budget, method of teaching, keeping record of the students, etc.)

3. stage: Implementation of the project → here some plan adjustments are possible according to the circumstances that may occur. Remember that the plan is not a dogma and if it needs to be adjusted to reach the goal then it may be changed. An example might be a situation where a student is limited by his / her abilities and he / she would not be able to handle the given activity in the set manner.

4. stage: Project evaluation → students should also be involved in the evaluation together with the teachers. This stage is very often omitted or simply evaluated only by the creators of the project which in many cases leads to the decline of individual activities.

The minimum you need to keep the attention of the listeners

The first contact with the listeners - your arrival tells a lot, the lecturer must try to control

the whole space around him/her, be confident. The principle of: an arrival - pause - speech.

It is necessary to maintain eye contact with the listeners. Looking to the ground is perceived as submissive and results in the decline of listener's attention. During a presentation it is important to stay in the upright posture, legs and hands should not be crossed and one should avoid unintentional movements.

Body language - the lecturer should use as much space around him/her as possible because it helps the audience to be receptive.

The basic principles how to present a scientific topic

"We only see what we know" - every topic contains many layers and aspects, while presenting the topic we try to reveal all possible views on the subject.

The presentation must be comprehensible and the listener must be drawn into the story, it is necessary to awaken the listener's interest and become open minded.

The lecturer must be an expert in his/her field and must be able to recognize the topic even though he/she might not have an according knowledge of the topic.

The popularization of science is a natural part of scientific work, it is nothing inferior or inappropriate.

In the case of more complex topics, it is advisable to use examples from everyday life.

It is advisable to use real examples to help listeners understand the scientific principle.

The topic: What is it going to be about?

- The key targets:** What should the participants specifically learn here?
- The target group:** Who are we going to teach?
- Time:** How much time is there for the topic?

<p>The topic - What are we going to teach?</p> <p>What are the main parts of the course?</p> <p>The target for the participants -What should the participants particularly learn here?</p> <p>Where should they find the improvement or change?</p> <p>Time - How much time is there for the sub topic?</p> <p>Method - How will I teach them? Which method am I going to use?</p>	
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Conclusion - What is our target? How will we find out that the participants have reached the target?