

Developing Entrepreneurial Skills using Project Teaching

Katarína Krpáľková¹ Dipl. Ing., PhD., Ing.-Paed IGIP; Pavel Krpálek² Ing., PhD.;

Dana Kolářová³, Master of Arts

University of Economics, Prague, Czech Republic^{1,2,3};

katarina.krelova@vse.cz¹; krpp01@vse.cz²; kolard@vse.cz³

Abstract: For successful development of entrepreneurship education the activity approach (learning by doing) is essential as well as the approach of linking theory and practice. The authors present their own experience with experimental teaching at two universities in Prague which main objective is to develop entrepreneurial skills of students namely initiative, proactivity, creativity, presentation and communication skills and ability to work in a team using project-based learning as a suitable educational concept. Based on the analysis, the authors present the results of surveys and interviews carried out after completion of experimental teaching focusing on evaluating the quality of teaching and contribution of the course to entrepreneurship education. The main benefit of the experimental teaching is that students consider the project-based learning as a suitable method to develop the key entrepreneurial competencies. This article is provided as one of the outputs of the research project of the Faculty of Finance and Accounting, which is realized in the framework of institutional support University of Economics project IP100040, IGA ID F1/31/2015.

Keywords: competencies, entrepreneurship skills, creativity, project-based learning, social relation.

Introduction

EU Commission recommends that entrepreneurship education at all types of schools should be focused primarily on developing such personal qualities of students which contribute to the development of positive attitudes towards entrepreneurship. It is mainly the development of creativity, sense of initiative, independence and teamwork. Entrepreneurs tend to have a very well developed ability to persuade others, communicate with others, are persistent and diligent, have a high need to achieve success, are not afraid of challenges and are good at solving them, have a high degree of confidence, they are independent and autonomous, creative with well-developed imagination, they can decide, can adequately take risks, are flexible, able to cope with the changes and tend to have leadership abilities and skills (Entrepreneurial Education..., 2012).

CELCEE - Kauffman Center for Entrepreneurial Leadership in Kansas (USA), based on years of research, found out that there were no special requirements for education of entrepreneurs, but helpful were well developed communication, information, interpersonal and personal skills, and understanding of the economy, knowledge and skills in marketing, management, mathematics and finance. These competencies, skills and knowledge can be obtained especially by education. Entrepreneurship ability of students, development of their entrepreneurial skills cannot be formed and developed by reading textbooks followed by subsequent memorization of the text. It is necessary to have an active approach - experiential learning which will bring students as closely as possible to the real life situations and will arouse their interest in education. (Nurturing the Entrepreneurial..., 2004).

In the author's view, the most important for the development of entrepreneurial skills of students is to adapt the style of teaching to the conditions of real life. It is necessary to develop learner autonomy, but also teamwork, creativity and initiative in problem solving tasks. Knowledge of modern educational psychology emphasizes the need of increasing the learner autonomy, the need to shift from external control to self-regulation. Most authors of pedagogy call for a dialogue and wider use of teaching methods based on activation and cooperation, thus such methods which would help the student achieve the knowledge actively and not passively receive it. The student should develop their ability to communicate, collaborate and learn. For these reasons, it is undisputed that there is a growing importance of integrated teaching methods such as project-based learning and co-operative teaching.

Project-based learning can be ranked among the most comprehensive teaching method, or more precisely modern concept of education. It enables to absorb whole array of simpler teaching methods. The project is then a kind of framework in which the training based on diverse methods is carried out, mostly the ones based on activity. In terms of the traditional teaching the project-based method is based on the integration of the curriculum.

If the authors had to describe project-based learning, the typical features would be:

- is focused, thoughtful and organized;
- links theory and practice, is aimed at being used in life;
- handles complex assignment, is aimed at challenging questions and problems;
- assigned problem can be solved in different ways, there is not only one solution - which encourages creativity;
- teaching is student-centred;
- meets the needs and interests of students as well as teacher instructional objectives;
- students learn through experience and it is subsequently applied in real life;
- develops work and study habits, students take responsibility for their own learning;
- students are personally involved in the project - considering the proposal, solving of the problem, decision making, and using activity approach;
- students present their own ideas and realistic solutions;
- students learn to finish work, not being afraid of making mistakes, self-confidence is developing;
- allows students to work in a team and develop human relationships, a sense of responsibility, affecting the personality as a whole;
- always ends by producing a final product, thereby enhancing the sense of learning, it is also important to record the course of learning process;
- teacher acts primarily in the role of consultant, advisor, partner;
- it is a chance to do something different, different from the ordinary teaching (Projektové vyučování, 2011; Králová, Novák, Krpálková Krellová, Krpálek, 2014).

By using the project-based learning method students significantly develop initiative, independence, creativity, critical thinking, ability to collaborate, communicate, ability to solve problems, seek relevant information. When selecting the topics for the projects incorrectly it can happen that the knowledge of students taught by this method compared to the knowledge of students taught in a traditional way will be less systematically arranged. Project teaching is more difficult for preparation and skills of teachers - it requires a high level of teaching skills, changing their habits and attitudes, and also appropriate technical equipment of schools. It is time consuming. The systematic use in teaching has many distinct advantages for students and teachers too.

The **main objective of teaching is to develop students' entrepreneurial skills** namely initiative, proactivity, creativity, presentation and communication skills and ability to work in a team of master's students at the University of Economics in Prague and bachelor's students at the Jan Amos Komensky University Prague by using the project-based method. Experimental teaching was implemented in the academic year 2014/2015 and 22 students attended the course of Presentation and Communication Technologies in Modern Concepts of Education at the University of Economics in Prague (Syllabus of the subject The Presentation and Communication Technologies in Modern Concepts of Education, 2015) and 102 students attended the course of Human Resources Management at the Jan Amos Komensky University Prague.

The partial aim is the qualitative analysis of the experimental teaching, in which we seek to uncover strengths, weaknesses, opportunities and threats of the use of project-based learning to develop entrepreneurial skills. In the following part of the paper the authors will specify the course of experimental teaching and research methods. Experimental teaching of both subjects was carried out by the same teachers so that their concept was very similar.

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Methodology

A) The course of experimental teaching in the subject Presentation and Communication Technologies in Modern Concepts of Education at the University of Economics in Prague

The course Presentation and Communication Technologies in Modern Concepts of Education was accredited by the Board of Education of the Faculty of Finance and Accounting of the University of Economics in Prague for the academic year 2013/2014, as an optional subject for students of bachelor's and master's study. It focuses on current trends in economic education and their reflection in modern conceptions of teaching at school and within company training. The main purpose of the course is based on the students' achieved professional economic competencies to develop their ability to communicate competently, negotiate persuasively, present their ideas and visions so that they are fully understood and accepted and shared by those to whom they are addressed. The course is evaluated by 6 credits. It is taught every week: 2 hours of lecturing, 2 hours of seminar. In lectures the teacher uses dialogic teaching methods - exposition followed by discussion and in seminars the following methods are used - activating methods as problem teaching, role play, case studies and project-based learning is included in the seminars. The assessment of the course involves the preparation and presentation of the project which aim is to apply a selected modern concept of teaching in preparation of a course suitable for company training. At the beginning of the course students are given the project specification and evaluation criteria. Students are then divided into groups of 3-4 in each and are assigned specific roles. Experimental teaching takes place during the seminars. Their final performance is filmed by a video camera and evaluated by the students from other groups and the teacher. After successful completion the graduates should know and be able to apply new trends in adult learning with a focus on project-based, problem, cooperative and programmed learning and e-learning, and should be able to communicate and present effectively. They should be more creative, should be able to solve problem situations, manage teamwork and communicate more effectively. For preparing the concept of project-based learning, the authors have used the concept recommended by I. Turek (2006):

- 1) the theme, its specification, setting the targets of the project has been chosen and the outcomes have been specified;
- 2) project solving has been planned; the procedure has been developed - a plan of the project, its division into sub-tasks, the division of students into groups (3-4 students), time limits have been set;
- 3) the stage of the project itself, implementation of the plan in which students play a leading role; the teacher plays the role of the assistant, opponent, consultant, mediator, moderator, and organizer;
- 4) presentation of the results of the project, filming the presentations, evaluating the work done on the project.

Example of Project Assignment

Prepare a training course, the focus of which can be chosen from the following options:

- Communication Skills
- Presentation Skills
- Argumentation and Rhetoric
- Successful Dealer
- Teaching Skills

Course participants are managers - targeting of the course depends on the type of company, which you can choose. Duration of the course is 2 days for 8 hours, within 2 weeks.

Tasks:

- Specify the course content (content, topics, timetable)
- Specify the educational goals of the topics
- In methodology characterize the use of problem-based learning and group work in particular topics (creating groups, the division of roles, evaluation criteria)
- Specify the criteria for achieving learning outcomes – of the entire course
- Present proposed course (educational product) from the perspective of the employee of an education agency (advertisement, presentation, poster, etc.). Time: 30 min.
- Simulate a sample of a teaching hour of the course using problem-based learning and group work. Time: 10 min.

Criteria of Project Evaluation – Semantic Differential Scale: +2 +1 0 -1 -2;

(+2 – all requirements met, +1 – meets most requirements, 0 – requirements met only partially, -1 – below requirements, -2 – does not meet requirements)

- Specification of the content of the proposed course
- Specifications of educational goals
- The level of usage of modern teaching concept
- Discourse (Language) - variety, style, comprehensibility, literary language
- Dealing with questions and objections - reasoning
- Speech - dynamics, pace, intonation, eye contact, facial expressions, posture, movement, gestures, proximity, chronemics
- The level of presented output (PowerPoint presentation, poster, advertisement, etc.) - originality, comprehensibility of presented information, technical processing, colours.

Final assessment is carried out with the authors of the paper together with all the students. The group of students is assessed as well as the individual students are assessed by the others and self-assessment is carried out onsite too. For further analysis of the performance the video camera recording is available to be downloaded from the Department website by the participants of the course. Students are recommended to do so. The following seminar, which is also the last one in the semester, in the context of self-reflection students present benefits, positive and negative aspects of the project-based learning or any other comments they have.

B) The course of experimental teaching in the subject Human Resources Management at the Jan Amos Komenský University Prague

The subject Human Resources Management is obligatory in the course of bachelor's studies in the major field of study called Management Studies. The course is evaluated by 3 credits and it is taught every week: 2 hours of lecturing (24 hours) and 1 hour of seminar (12 hours).

The main objective of the course is to introduce human resources management as a specific management area and as a complex and multi-functional organizational system. The main aim is the development of skills necessary to establish and maintain successful employer-employee relations. In lectures the teacher uses dialogic teaching methods - exposition followed by discussion and in seminars the activating methods are used. As in the previous course, project-based learning is included in the seminars, namely 6 lessons. The assessment of the course involves the preparation and presentation of the project which aim is to prepare the advertisement for the selected job position and its presentation at a fictional job trade fair. At the beginning of the course students are given the project specification and evaluation criteria. Students are then divided into groups of 3-4 in each and are assigned specific roles. The final performance is evaluated by the students from other groups and the teacher.

Project Assignment

Think of a job position which will be advertised by human resources department at a job trade fair, which takes place in Areál Výstaviště in Prague 7.

Tasks

- Present the company (enterprise, corporation) and select the job position which will be advertised at the job trade fair. Think of a logo.
- Take into account the above mentioned attributes (company's name and its brief introduction, job title, job description, workload, the requirements for candidates, what the company can offer (benefits, bonuses), contact person (name, phone, mail), setting the date by which it is possible to respond to the ad, location or place of work, salary offered).
- Prepare a marketing tool - poster for promoting the advertised job.
- Present the company (enterprise, corporation) and the offered job position to potential candidates at the job trade fair. Time: 20 min.

Figure 1 presents students' independent work on the project.



Figure 1. Project work of students (own source).

Criteria of Project Evaluation:

- the content of the poster - job title, relevance of the information on the ad, idea;
- quality of the poster - comprehensibility, clarity, variety of colour, logo, format;
- presentation skills of students - verbal expression, using of non-verbal means of communication, the ability of reasoning and presenting their own view, managing of constructive criticism.

The presentation is followed by a discussion between students and presenters, the other students play the role of potential candidates for the proposed job. They ask additional questions and get the required information. The discussion is followed by evaluation in which students from other groups and the teacher take part and the predetermined criteria are taken into account.

Results and discussion

As a partial goal the authors set the qualitative analysis of the experimental teaching, in which they seek to uncover strengths, weaknesses, opportunities and threats of the use of project-based learning to develop entrepreneurial skills.

The qualitative analysis is based on the results of the evaluation of quality of the subject The Presentation and Communication Technologies in Modern Concepts of Education taught in the academic year 2013/2014 and 2014/2015 and on the results of the evaluation of quality of the subject Human Resources Management taught in the academic year 2014/2015.

The evaluation was obtained in the form of analysing surveys, students were questioned at the end of the semester at The University of Economics in Prague in the year 2013/2014 ($n = 6$ out of 7) and in the year 2014/2015 the structured interview was carried out ($n = 20$ out of 22). The evaluation at the Jan Amos Komensky University Prague was obtained in the form of analysing surveys ($n = 102$). The results are shown in Table 1.

The authors state that their main objective should be to support the strengths, use opportunities, eliminate weaknesses and avoid threats. The above analysis shows that the project-based learning brings many positive moments and opportunities; demands on students are higher, but the learning results are more permanent because the learning process is supported by their interest, activities, personal responsibility, usability in real life and pride in product formed (the project). The presentation

of the product itself becomes an important part of the learning process. Students have the opportunity to present their own product, to show their presentation skills. They learn to accept constructive criticism and to evaluate their own work and the work of the members of the group at the same time. The aim is to be as close as possible to real life situations so that schools prepare graduates to be able to work in teams, communicate effectively and solve problems.

Table 1

Scheme 1: SWOT analysis

	SUPPORTING (to achieve the objective)	HARMFUL (to achieve the objective)
INTERNAL (attributes of organization)	STRENGTHS • Interesting content - topics of projects • Using creativity • Motivation for learning new things • Engaging in higher levels of thinking • Learning to find and work with information sources • Learning to plan and organize work • Linking theory and practice • Cooperation and teamwork • Specific output • Deeper insight into the issues • Training of presentation skills, reasoning • Organization of teaching - precise rules • Video recording of the presentation of the project - noticing of nonverbal communication • Didactic competences of the teacher	WEAKNESSES • Time for project preparation • Inadequate classroom for group work • The absence of students on seminars - not always all team members met together • Assessment of individual performance within the group • Most of the students had never met before - did not know each other • Effective communication in a team • Managing assigned roles in the group
EXTERNAL (environmental attributes)	OPPORTUNITIES • Search for new topics on project-based learning • Require satisfactory classroom – to be able to organize the space (tables and chairs) • With a larger number of students to create larger groups - from different fields of study • Linking to professional career - project management in companies • Using of project-based learning in other subjects	THREATS • Evaluation of individual student's performance • Not enough students in registered for the optional subject • Teachers who do not have sufficient teaching skills for the implementation of project-based learning

At the University of Economics in Prague, the quality of experimental teaching was checked by using the method of structured interview with a combination of open and closed questions (open questions prevailing), at the Jan Amos Komensky University Prague a survey was conducted. The authors were interested in concrete results i.e. in how students rate the expertise of teachers, teachers' willingness to help, their interest in the subject and the necessity of the subject, the suitability of the project-based learning, usefulness for real life and overall quality of the subject.

The results of the survey at Jan Amos Komensky University Prague (n=102):

- 92% of respondents considered the teacher as an expert,
- 90% of respondents considered the teacher as willing to help when needed,

- 89% of respondents considered the subject Human Resource Management as interesting and, with regard to their major field of study as necessary,
- 86% of respondents considered using of project-based learning as appropriate in the subject Human Resources Management,
- 90% of respondents stated that this form of teaching was beneficial because it brought teaching close to real life situations and they had the opportunity to develop creativity, presentation and communication skills and ability to work in a team,
- 94% of respondents were satisfied with the overall quality.

The results of the interview at University of Economics in Prague (n=22):

- 100% of respondents considered the teacher as an expert,
- 100% of respondents considered the teacher as friendly and willing to answer students' questions,
- 100% of respondents found didactic competence of the teacher as excellent,
- 87% of respondents found the content of the course useful in real life situations,
- Preparation of the project in teams bringing experience for future career is considered by respondents to be very important - on a scale from 1 to 10 the average rating was at 8.8,
- Using the concept of project-based learning to prepare the output of the course was evaluated by the respondents on a scale from 1 to 10 at an average value of 8.5,
- 91.7% of respondents considered a form of presentation of the project in front of other students as contribution to the development of their presentation skills,
- 97.6% of respondents were satisfied with the overall quality of the course.

Conclusions

On the basis of completed research and experimental teaching, the authors present in conclusion that:

- project-based learning contributes to the development of creativity, communication and presentation skills, ability to work and communicate in a team, i.e. develops entrepreneurial skills;
- project-based learning brings teaching close to real life situations;
- project-based learning requires teachers with sufficient didactic competences; preparation, implementation and evaluation is challenging work;
- project-based learning contributes to the achievement of educational goals at higher levels of Bloom's Taxonomy.

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