

Entrepreneurship Education of University Students - Examples of Good Practice

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Abstract – Entrepreneurship education is offered at all levels of education. This theme resonates in many strategic documents at the national and European levels. The first aim of this paper is to present two educational activities aimed at developing the entrepreneurial skills of university students in the Czech Republic. The second objective is to present the results of surveys conducted among students of a university-wide elective course focused on the above-mentioned area. Survey was focused on motivation and expectations from participating in the course. The most substantive responses are presented in the paper. These activities are also inspiring for contemporary engineering pedagogy.

Keywords – Entrepreneurship, education, university students, motivation.

1. Students' Entrepreneurship Development

A wide range of strategic documents at the European level emphasises entrepreneurship education. For example, it is the focus of the Strategic Framework for European Cooperation in Education and Training, which aims to improve creativity and innovation, including entrepreneurial skills, at all levels of education and training [1].

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Another important document is the Entrepreneurship 2020 Action Plan, which describes entrepreneurship education as one of three key areas to support economic growth and job creation [2]. Systems of support for entrepreneurship education are heterogeneous across these countries. In the Czech Republic, for example, the support for this area of education is defined in the National Youth Strategy for the years 2014-2020 issued by the Ministry of Education, Youth and Sports and approved by the government. It defines the support of motivation of young people to actively create an entrepreneurial environment, to do their own business, and transform their creative and innovative ideas into business plans, etc. The key to this effort is a better and more intensive link between business and academia [3]. An example of good practice in this area is, for instance, Junior Achievement Europe, which aims to connect primary, secondary, and university pupils and students with businesses. An essential part of the changes in entrepreneurship education is the issue of providing quality teachers and mentors, including the involvement of business practitioners willing to pass on their experience to students [4].

The European Reference Framework 2018 defines the competence for entrepreneurship as the ability to seize opportunities and ideas and create value for others from them. At its core are creativity, critical thinking, problem-solving, initiative and perseverance, and the ability to work with others to plan and manage projects that have cultural, social, or commercial value [5]. An important document supporting the development of this area is the so-called Oslo Agenda, the content of which is divided into four parts (A, B, C, and D) and its part C is devoted to supporting teachers, and part D is dedicated to entrepreneurial activities in schools and higher education [6].

The teaching of entrepreneurial skills and entrepreneurial thinking requires the use of pedagogical methods that are not easy to apply in traditional educational environments and settings. Europe has not yet built up as large a tradition of entrepreneurship education as, for example, the USA.

Similarly, there is a perceived lack of academic staff to teach such subjects because they do not have the appropriate entrepreneurial experience.

Research provides the evidence of the importance of entrepreneurship education and training during the course of studies. These studies also suggest that students are influenced not only by the university environment but also by their family background and the society in which they live. The fact that family environment and intergenerational learning have an impact on entrepreneurial aspirations is demonstrated by the research of Kamanová et al [7], [8]. One of the most well-known international long-term research projects is the Global University Entrepreneurial Spirit Students' Survey [9]. It aims to understand the intention, motivation, and steps towards entrepreneurship of university students by using geographical and temporal comparisons [10]. Its latest wave was conducted in early 2021 and involved 58 countries including the Czech Republic, collecting 267,366 responses. The survey results showed that students would choose a career as an employee rather than an entrepreneur, both after graduation and in the future. On the other hand, 21% of them started their business while in college and 86% of the respondents said that their business plan was not related to the college environment [11].

Universities play a key role in increasing students' motivation for entrepreneurial activities. For university didactics and also for engineering pedagogy, this raises many interesting suggestions and questions related to the organizational setup, environment, methods, and forms through which to teach entrepreneurial skills, which environment is best suited for these purposes, etc. The personality of the lecturers, their preparedness, erudition, experience and practice, and other aspects are also important in this context. Entrepreneurship education methods are spread between the dimensions of concrete experience and abstract conceptualization and learning styles on a scale from active experimentation to reflective observation [12].

2. Examples of Entrepreneurial Skills Development at University Environment

Mendel University in Brno (hereinafter referred to as MENDELU) was founded in 1919. The University consists of five faculties and one university institute. In 2020, a total of 8 886 students (57% female) studied at Mendel University in Brno, of which 69% were in bachelor's studies, 25% in master's studies, and 6% in doctoral studies [13]. In recent years, Mendel University in Brno has placed great emphasis on the development of entrepreneurship in students.

In addition to the study of economics, the university offers its students two opportunities to develop entrepreneurial skills. One of them is a one-semester lifelong learning programme (course) called Do Business! (original brand – Podnikni to!) and the other option is a university-wide elective subject for which four credits (according to The European Credit Transfer and Accumulation System - ECTS) can be earned and that is called STARTUP MENDELU. Both products are further described below.

The Do Business! course has been implemented at MENDELU (specifically at the Institute of Lifelong Learning) 13 times since the autumn semester of the academic year 2016/2017 and the total number of participants to date is 230 people, including 193 students, and as it is a “lifelong learning programme”, it has also been attended by three dozen members of the public. *The Do Business!* platform is a team of dozens of successful entrepreneurs and freelancers who are dedicated to developing entrepreneurship in a wide range of people. This group has created a special methodology for pre-incubation courses especially suitable for non-entrepreneurs and aspiring entrepreneurs. Their story started with courses at Mendel University in Brno, and as a result, these activities have spread to other universities in the Czech Republic, and today the company cooperates with cities and municipalities to promote local entrepreneurship.

Table 1. Structure of participants of the course Do Business! and the subject STARTUP MENDELU during their implementation

	Do Business!		STARTUP MENDELU	
Faculty of Business and Economics	90	45.9%	22	20%
Faculty of AgriSciences	44	22.4%	37	33.6%
Faculty of Forestry and Wood Technology	25	12.8%	28	25.5%
Faculty of Horticulture	18	9.2%	9	8.2%
Faculty of Reg. Development and International Studies	16	8.2%	11	10%
Institute of Lifelong Learning	3	1.5%	3	2.7%
bachelor's studies	129	66.8%	76	69.1%
(continuing) master's studies	54	28.0%	34	30.9%
doctoral studies	10	5.2%	-	-
male	116	50.7%	53	48.2%
female	113	49.3%	57	51.8%

Source: Own Data Processing

The Do Business! programme is very concrete and practical. Uniquely, the methodology is delivered by a successful entrepreneur from practice in the role of a lecturer who guides the students through the entire course.

The lecturer is also a mentor and a consultant and at the same time supports their motivation for entrepreneurship, showing them the real business world. The lecturer’s personal experience and concrete tips from personal practice are valuable. The course takes the form of workshops, which are aimed at a smaller group of students (8-16 people). The power of the group and the opportunity for constructive critical feedback is widely used. The information delivered on the Do Business! course is compatible with all types of businesses. It doesn't matter if the participants want to start a small local business, earn money through their own project while employed, work as freelance professionals or build an international company. The information can be used at any time in the future when the graduates decide to dedicate themselves to their business plan.

The course graduates can then become members of the Entrepreneurs Club - a community that creates a supportive environment for entrepreneurial people in the early stages. The long-term goal of this group is to create systematic support for people in the beginning stages of entrepreneurship in the Czech Republic [14].

Table 2. Structure and content of the course Do Business!

Order and title of the workshop	Brief content
1 Business plan	What is entrepreneurship - finding a common definition? Motivations, obstacles, and concerns. Finding and working with an idea - how, when and where to talk about an idea?
2 Lean canvas	Elevator Pitch - presentation of participants' individual projects with feedback. Lean Approach – a case study of a graduate of the course. Minimum product. Lean canvas – one-page project.
3 Problem validation	Risk Searching - distinguishing risks and uncertainties, critical feedback from others. Validation - what it is, how it is done, how to prepare for it. Problem validation - case studies. Networking.
4 Validation of solutions	Fail management solutions - the cycle of (failure) success. Solution validation - case studies. Valuing the product. Interviewing the guest.
5 Project status	Project status - the three pillars. Money - the different financial phases. Investors - how to present my idea?
6 Training	Training with business mentors. Training presentations for each project and feedback from other participants.
7 A day with pros	Presentation of business plans in series and feedback from professionals. Recapitulation of each topic.
8 The Future	Information on the Entrepreneurs Club and the opportunity to register. Law - how to set up a company, formalities, and taxes.

Source: MENDELU Course Catalogue and own processing

The STARTUP MENDELU subject has been taught since the summer semester of the academic year 2019/2020 and has been implemented five times so far. In total, more than a hundred students have participated in it. The aim of the course is to familiarize students with the most important information and procedures related to starting and implementing a business. The course also aims to acquire the skills necessary to develop and effectively present a business plan while working in a team composed of members of different professional or personality characteristics. Last but not least, the course aims to introduce students to concrete examples of practical methods and procedures for the implementation of a business idea, including financing, with selected entrepreneurs with many years of experience as inspirers. After completing the course, the students are able to assess the realistic possibilities of implementing their business idea in practice. They will gain the ability to evaluate the commercial potential of their idea in the marketplace and develop a business model. They are able to evaluate, calculate and propose ways of financing a business idea. They will learn how to effectively present a business idea to representatives of financial institutions or potential partners. The course takes the form of thematic lectures combined with practical workshops (training). The students work on their business plans in teams (groups) while being mentored by entrepreneurs from practice and expert lecturers who are also consultants on individual projects. The course is completed with a credit, the condition for obtaining it is the participation in five out of six lecture blocks and a joint presentation of the developed business plans [15].

Table 3. Structure and content of the course STARTUP MENDELU

Order and title of the workshop	Brief content
1	What is entrepreneurship and how does it relate to personal vision and strengths? Introduction to business, personal vision, and strengths, creating teams.
2	Which ideas succeed in the marketplace and how to know it quickly? Lean canvas and market research.
3	How to create a workable product or service and how to manage it all? Solution definition, minimum viable product, prototyping, team roles + action plan.
4	Where to get the money and how to keep track of finances? Business model, pricing, basics of financial management, and idea financing.
5	How to start a company and protect your idea? Legal minimums for starting a company, protecting intellectual property, and setting up spin-off companies + mentors day.
6	How to present and communicate an idea? Presentation of business plans with prizes for the best teams.

Source: MENDELU Course Catalogue and own processing

The subject is implemented in cooperation with the South Moravian Innovation Centre (hereinafter JIC), on which premises it usually takes place. JIC is a Czech interest association of legal entities, which focuses on the promotion of innovative entrepreneurship and the commercial use of research and development. The JIC facilitates the linking of universities and scientific research institutions with the business sector in order to maximise the benefits of research and development at the regional and national levels. JIC helps innovative companies, students with original ideas, or researchers in business with company development and innovation. The priority areas of JIC support are software engineering, computer security, engineering, biotechnology, robotics, digitalization, and space technologies [16], [17], [18].

The graduates of the Do Business! and the STARTUP courses at MENDELU can then apply for the competition "For the best business idea of MENDELU". The course of the competition consists of several stages. The condition for the participation in the first stage is that a MENDELU student or a group of MENDELU students have registered. Another condition is to prepare a business idea and to submit it according to the registration instructions in the format of a 90-second video presentation of the participant (or team) and their business idea, Lean Canvas, competitive analysis, market research, and financial implementation plan. The evaluation criteria are mainly the quality of the business idea, potential, feasibility, and achievability of the goals. The second stage of the competition is the presentation of the business idea itself. Each of the winning participants will receive the "Award for the best business idea of MENDELU" and a scholarship in the amount determined in advance. If the participant is a team, the MENDELU Best Business Idea Prize will be awarded to each member of the team; the scholarship will be divided among the team members in the proportion communicated to the Promoter by the Managing Director. Successful defence of the implementation of the business plan is a prerequisite for the third stage of the competition. The defence takes place in front of a committee. The evaluation criteria are mainly: the fulfilment of the business plan and the potential for further growth. Each participant who successfully defends the implementation of the business plan will receive a scholarship from the promoter in the amount proposed by the committee [19].

3. Motivating Students to Learn Entrepreneurial Skills

Before the beginning of each semester in which the STARTUP MENDELU course has been taught so far, a survey was conducted to determine the students' motivation for participating in this course. In it, those interested in taking the course answer six open-ended questions. In relation to the aim of this paper, we present the following descriptive view, especially on question 1:

What motivates you to enrol in this course and what do you expect from the course?

In the interpretive process, we use selected data extracts from the most concise responses of individual respondents, and we grouped these responses into thematic units according to common denominators. A total of 110 completed questionnaires were analysed and the subject has been taught a total of five times so far.

A large set of respondents agreed that they were motivated to enrol in the pre-course by a desire for new and useful information about what entrepreneurship actually is and how to get started. Among other things, they were motivated in this sense by the opportunity and chance to discuss their ideas and views on their proposals' feasibility with experienced entrepreneurs to whom they would otherwise not have access, to get feedback on their ideas, etc. In this context, the students were also motivated by the possibility of intensive interaction and sharing of experiences with their classmates to help them to consolidate their ideas, priorities, or other life goals. For example, the following statements were characteristic:

"...I'm looking forward, especially to learning from people in the field - no lectures from scripts but real experiences. I want to make new contacts, both among students from different faculties and disciplines, but also among professionals. I like the fact that our university is starting to move forward in this area as well..."

"...I have been toying with the idea of entrepreneurship for some time and I think this is a great opportunity to learn about it directly from the experts. I'm expecting to hear advice and experience from people who have made a difference in business and are willing to share it..."

"...I expect to learn about starting a business, managing it, and how to create the best possible idea to succeed in the marketplace. If we work on one group project all semester, I expect to take away a lot more practical information from the class than if I were to learn theory from a paper..."

"...I didn't even think it was possible to learn about business from the real world while studying. It seems like an absolutely great idea to me, if only because I will have a head start compared to others who are yet to gather information on business after studying..."

In the students' responses to the question about their motivation to participate in a course focused on entrepreneurship development, there was also a high degree of awareness of their own personality or uniqueness, a sense of self-realization, and a desire to apply their own ideas and talent as opposed to passively following orders from superiors and to some extent rejecting the idea of their own future as an employee.

"I am motivated by the opportunity to acquire new knowledge and, based on this, skills that will benefit my development and increase the possibility of self-fulfilment and competitiveness in future employment."

"I see the course as a great start for imaginative students who get the opportunity to show what they have. And maybe the school will find out what talents they are actually hiding. So the school will actually help the students and then the students will help the school in the future."

"The school and curriculum will prepare me enough to be employed, not to go my own way. That's why I was attracted to MENDELU STARTUP elective course, which will open the door to the world of business."

"I want to leave a legacy - something to prove that I lived here and that I wasn't just one of many employees in a large corporation."

The statements that testify to the students' social feelings, selflessness, willingness to help others and perception of the strengths (synergistic effect) of teamwork can be considered a very pleasing statement about their character. For example, the following statements:

"...As part of my studies, I try to seek out courses and programmes that will give me valuable experience for life. This course is guaranteed to be one of them, as it will give its participants a much more realistic experience of teamwork..."

"...At the same time, I expect the course to be an asset to my colleagues and I, exchanging experiences and perspectives on things that are often perceived differently by different people..."

"...In the past, I had the opportunity to experience working in a product development team at foreign universities several times. Unfortunately, there are not many opportunities to work in a team while studying, so I would like to take advantage of this opportunity..."

"...I decided to take responsibility for myself, learn from others' mistakes and now I am looking for a way to learn how to work in a team, to use my strengths and work on my weaknesses..."

Finally, it can be considered very interesting and positive that among the responses there were often statements showing a high level of awareness of the students about contemporary phenomena such as environmental issues, ecology, sustainability, etc. From the students' statements, it can be seen that they perceive these problems and are able or willing to reflect on them in the preparation of their business plans.

"...Specifically, I would be interested in how to encourage more environmentally friendly customer choices in the sense of conflict of cheap/poor quality vs. expensive/quality. I'm a big fan of the idea of a circular economy, but I'd say the average person will choose quantity over quality..."

"...I would like to learn more about entrepreneurship so that I can one day contribute to the development of society towards intelligent and environmentally conscious conservation..."

4. Summary and Conclusion

As mentioned in the introductory parts of the paper - universities play a crucial role as disseminators of knowledge in society. They also play a key role in increasing students' motivation for entrepreneurial activities. As part of their activities, they set up various training or innovation centres that run courses or other activities aimed at developing entrepreneurship or promoting innovation. These activities generally promote teamwork, creativity, initiative, critical thinking, solution-finding, decision-making, working with emotions, risk assessment, organisation, lifelong learning competences, information and communication technology skills development, etc.

Entrepreneurship is generally seen positively as a means to increase employment, raise living standards, promote common goals, etc., with innovation and creativity being the key success factors. Teaching entrepreneurial skills is certainly the mission of all universities today.

In the Czech Republic, almost all universities are trying to develop various activities in this respect, either on their own or in conjunction with a company or innovation development agency in their region. Such an example has been described in this paper.

There are many reasons to motivate university students to engage in entrepreneurial activities. Many universities worldwide including the Czech Republic, are encouraging students to step out of their comfort zones. They aim to demonstrate through examples of good practice and provide contact with experienced professionals that it is possible to achieve success in life through one's own efforts and not just by being an employee. These activities take various forms and often culminate in competitions with different award options.

The aim of the paper is to present two possible options or implementing activities that foster the development of entrepreneurial skills among students at a selected university, using examples of good practice. The aim of the paper is also to describe specifically the motivation of students to become entrepreneurs and to participate in such courses, as the continuous investigation of these motivations and needs should be part of the evaluation activities of the university.

Entrepreneurship education can take many forms and uses many pedagogical methods. The development of this issue is very inspiring for the whole higher education sector, as it places increased demands on intensive cooperation with relevant practices, companies, and institutions, including research institutions. For university pedagogy and engineering pedagogy, this opens up a wide field for research-focused, for example, on the didactics of entrepreneurship education, since teaching in such courses places new and specific demands on the university teachers involved and must definitely develop in this direction. At the same time, it is important to explore the effectiveness and potential of using a wide range of methods for entrepreneurship development, to promote mobility of the academics involved, knowledge sharing, and networking between academic departments in order to share knowledge and best practices across countries.

References:

- [1]. EUR-Lex. (2009). Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (ET 2020). *Official Journal of the European Union*. Retrieved from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XG0528\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XG0528(01)&from=EN) [accessed: 21 February 2023].
- [2]. EESC. (2013). *The Entrepreneurship 2020 Action Plan*. EESC. Retrieved from: <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/entrepreneurship-2020-action-plan> [accessed: 24 February 2023].
- [3]. MŠMT ČR. (2013). *Koncepce podpory mládeže na období 2014 – 2020* [Concept of Youth Support 2014-2020]. MŠMT. Retrieved from: <https://www.msmt.cz/mladez/narodni-strategie-pro-mladez> [accessed: 11 March 2023].
- [4]. *Junior Achievement Czech*. (2022). Retrieved from: <https://jaczeech.org> [accessed: 12 March 2023].
- [5]. EUR-Lex. (2018). *Council Recommendation on key competences for lifelong learning*. Eur-Lex. Retrieved from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)) [accessed: 22 March 2023].
- [6]. Entrepreneurship Education in Europe. (2006). *The Oslo Agenda for Entrepreneurship Education in Europe*. Europa.eu. Retrieved from: <https://ec.europa.eu/docsroom/documents/8968/attachments/1/translations/en/renditions/pdf> [accessed: 20 March 2023].
- [7]. Kamanová, L., Pevná, K. & Rabušicová, M. (2016). A Family Business as a Space for Intergenerational Learning Interactions. *Studia paedagogica*, 21(2), 43-66. doi: 10.5817/SP2016-2-4
- [8]. Rabušicová, M., Kamanová, L., & Pevná, K. (2016). Family learning models in intergenerational perspective. *The New Educational Review*, 45(1), 64-75.
- [9]. GUESS. (2022). *Global University Entrepreneurial Spirit Student's Survey*. Guesssurvey. Retrieved from: <https://www.guesssurvey.org> [accessed: 21 May 2023].
- [10]. Rydvalová, P., Antlová, K. & Lamr, M. (2017). *Vztah studentů k podnikání – Celosvětový průzkum GUESS 2016 z pohledu studentů českých vysokých škol*. Technická univerzita v Liberci.
- [11]. Rydvalová, P., Antlová, K. & Lamr, M. (2021). *Student entrepreneurship in the Czech Republic 2021* [Attitude of students towards business : Global survey GUESS 2016 from the point of view of students of Czech universities]. Technická univerzita v Liberci.

- [12]. Benešová, T. (2015). *Výchova k podnikavosti: Perspektivy teorie a praxe*. [Doctoral dissertation, Masarykova univerzita, Filozofická fakulta].
- [13]. MENDELU. (2021). *Výroční zpráva Mendelovy univerzity v Brně za rok 2020 [Annual Report of Mendel University in Brno 2020]*. Mendelu. Retrieved from: https://is.mendelu.cz/dok_server/slozka.pl?id=79188;download=264620 [accessed: 21 May 2023].
- [14]. *Podnikni to!* (2022). Retrieved from: <https://podniknito.cz/nas-pribeh> [accessed: 24 May 2023].
- [15]. MENDELU. (2022). *Startup Mendelu*. Mendelu. Retrieved from: <https://mendelu.cz/startup>
- [16]. *Jihomoravské inovační centrum*. (n.d.). Retrieved from: <https://www.jic.cz/> [accessed: 21 May 2023].
- [17]. Hrmo, R., Miština, J., & Krištofiaková, L. (2016). Improving the Quality of Technical and Vocational Education in Slovakia for European Labour Market Needs. *International Journal of Engineering Pedagogy*, 6(2), 14–22. Doi: 10.3991/ijep.v6i2.5369
- [18]. Andres, P., Dobrovská, D., Vaněček, D., & Miština, J. (2021). The Impact of the Pandemic Crisis on Technology Standard of Traditional University Education. In Auer, M.E., Hortsch, H., Michler, O., Köhler, T. (eds) *Mobility for smart cities and regional development - challenges for higher education: Proceedings of the 24th International Conference on Interactive Collaborative Learning (ICL2021)*, 187-198. Springer, Cham. https://doi.org/10.1007/978-3-030-93907-6_20
- [19]. MENDELU. (2022). *O nejlepší podnikatelský nápad MENDELU*. Mendelu. Retrieved from: <https://mendelu.cz/podnikej/soutez/?psn=100> [accessed: 05 April 2023].